

VWE System 4.0

User Guide and Technical Manual



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TESLA™ VR
S Y S T E M

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Tesla Pod Description

Tesla is VWE's system 4.0 cockpit based virtual reality system. Tesla is a cab based vr experience which has the nodes connected via a high speed network for multi-user interaction. Unlike other vr systems, Tesla is not immersive, or head mount, based. It is a platform which creates a cockpit environment for the player to simulate vehicles or craft.

Tesla is a distributed processing system which utilizes a computer in each cockpit to generate the "world" the user sees. These computers then exchange position and environment updates to each other to provide the interaction. The system is advantageous since it prevents critical failures and has a fair amount of redundancy.

The cockpits are located in centres and are just part of a much larger system of computers in the site. Each cockpit has in it an Intel based Pentium PC equipped with cards to handle sound generation, network connection, and auxilliary video generation. A Division graphics card is also in the game PC and it provides the main screen video output.

A typical site will consist of a groups of cockpits connected to each other via an ethernet active hub. On this hub will be connected an operator's console (a PowerMac), a group of cockpits (a 'side' or 'set' of cockpits) and a cameraship/mission review PC. Each set of cockpits is then attached to an HP fast packet switcher which acts as the router for the network. There is also a reservation hub which has connected to it the reservation system of the site.

Also on another leg of the router is an ISDN line bridge/router. This node allows remote diagnostics and other WAN services. In the future, it will also be used to provide access for games connecting other centres.

Ethernet Description

The apple macintoshes are connected to each other through the use of an ethernet network. The network used is a standard 10 MBit/sec network and uses the apple ethertalk protocol. The ethernet network is laid out in a star configuration with each macintosh component at the end of each arm. The standard wire type used to carry the ethernet traffic throughout the center is category III Unshielded Twisted Pair (UTP). Also since the wire is typically not run throughout conduit in the centers, the UTP should be plenum rated. Normally, a single hub is not sufficient to handle the number of nodes in a center so two or more hubs are connected together by using a thin RG58A (50Ω) coax cable and terminators. In some centers, the hubs are connected by using port 12 on the hubs as connection ports and having the hubs connect using UTP. Consult the active hub's documentation for more details about stacking hubs.

Ethernet Layout

The typical layout of a center is shown in the enclosed figure. All the computers (including cockpits and Macintoshes) and the laserwriters are connected to an ethernet hub. The ethernet hubs are, in turn, connected to an HP fast packet switcher. The switcher is an intelligent, learning router which isolates the network traffic that is on the system. Currently, the each side of cockpits which includes the relevant cockpits, opscons, and cameraships are on one branch of the switcher. The reservation system is also on another branch of the switcher while the ISDN bridge is put on another branch. This set-up is illustrated on the following sheet.

All of the macintosh nodes in the network use a ethernet transceiver (at the time of this writing, standard issue in our stores are Asanté FriendlyNet Adapters) which connect to the AAUI port of the device. The output of the transceiver is then hooked up to the network wiring of the center. The cockpits have a PCI based ethernet card mounted in the chassis and has a RJ45 jack built-in. The network wiring is installed during the building of the center and it usually terminates in a RJ45 connector. A RJ45 ethernet connection uses 4 out of the 8 connection points on the jack.

The pinout is as follows:

Pin	Connection
1	TX+
2	TX-
3	RX+
4	N/C
5	N/C
6	RX-
7	N/C
8	N/C

Pin 1 is defined as leftmost pin when looking at the insertion end of the jack with the polarizing key pointing up.

Note that each node on the network returns separately to the ethernet hub. The figure has the lines consolidated for clarity. It should be noted that the ethernet network is tested by the install team and that the actual wiring of the ethernet is very stable.

An easy way to test for line integrity between the device and the hub is to create a loop test device. This is done by taking a RJ45 connector and looping a connection from pin 1 to pin 3 and pin 2 to pin 6. If you plug this device into the device end of the line you should see the line integrity light come on at the hub.

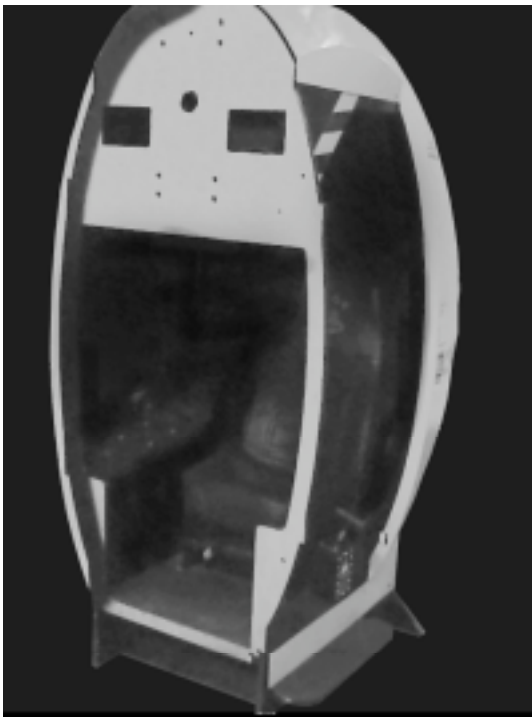
Pod Layout

The pod itself is split into three different sections than can be transported to the site and assembled. These being the base, front section, and rear section. The base is the first thing to be layed out and leveled. The front and rear sections are set upon the base and then slid toward each other to meet in the middle. The front section and rear section each have four bolts which are then inserted into the base to lock them down. Also four bolts are connected to the front and back to lock them to each other.

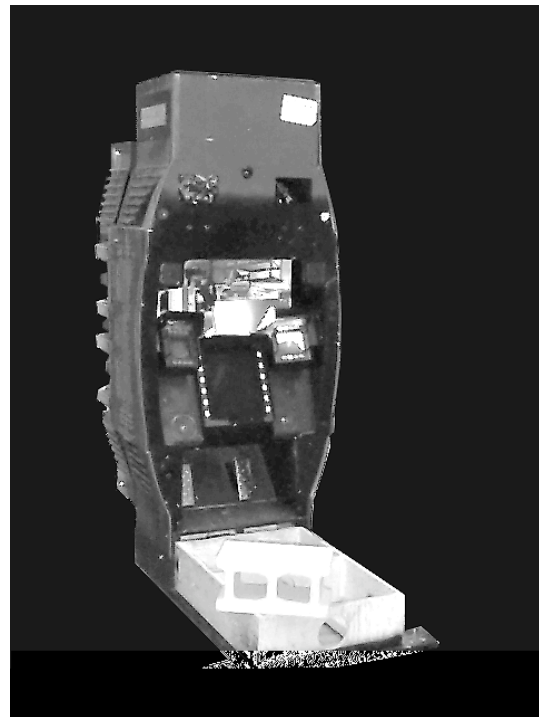
The front section of the 4.0 Pod contains the following items: PC, Remote I/O, Amp Board, Power Supplies (5V, 12V, Amp), Main Isolation Transformer, external Switch, Main Screen, Secondary Screen, The two lower Aux. Monitors, Foot pedals, Front speaker sections, Plasma Display, Tube light Display (Tesla Coils).

The Rear section contains the following items: Upper Aux. Monitors, Seat, Joystick, Throttle, Rear speaker sections, panic button, and Convenience lights.

The connections for the front and back half of the pod to each other is either within the base unit or through a hole that is located behind the upper center Aux. Monitor Case.



Tesla Pod Rear Section



Tesla Pod Front Section (Tower)

Power System

The power system contains the following items: Main Isolation Transformer, External Switch, Power Distribution Box, 5V Power Supply, 12V Power Supply, and the Power supply for the Amp Board.

The power comes in from a 110 V AC socket to the External Switch box located under the front section of the pod. From the External switch it then runs to the Main isolation Transformer. From the Transformer it then goes to the Power Distribution Box.

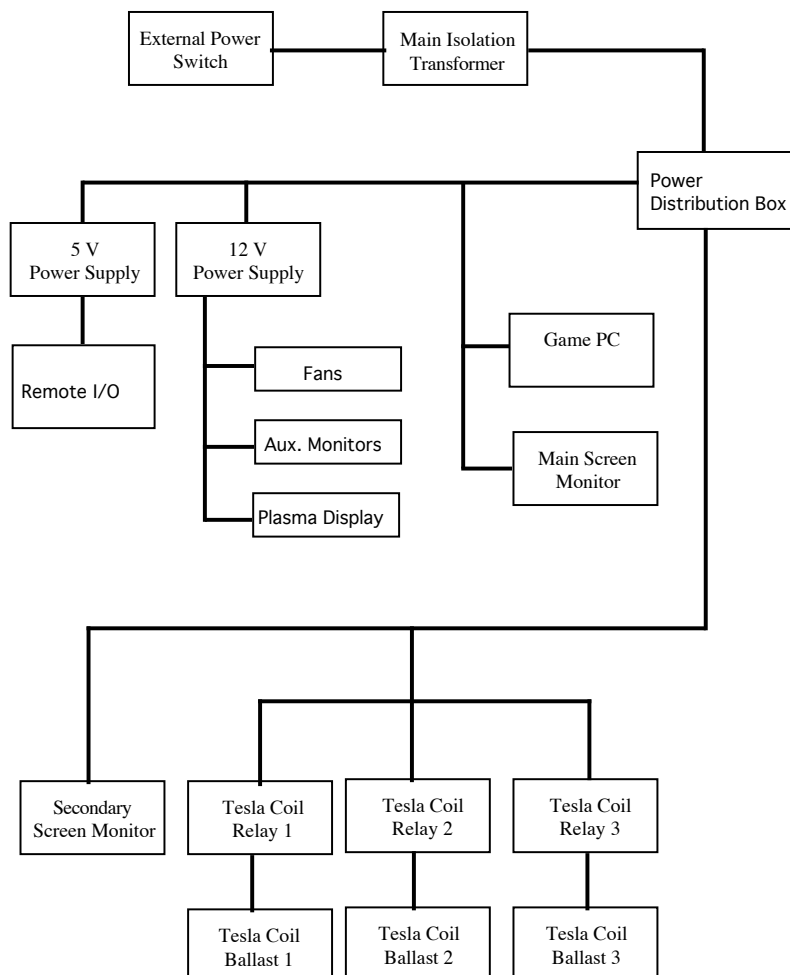
The Following Items plug into the Power distribution Box: Main Screen, Secondary Screen, PC, 5V Power Supply, 12V Power Supply, Amp Board Power Supply and Tesla Coils.

The 5V Power supply only handles one thing and that is to the Remote I/O Board which in turn powers the Button Boards.

The 12V power supply is used for the following systems: Fans, Aux. Monitors, Plasma Display.

The Main Isolation Transformer, 5v power supply, and 12v power supply are located in the lower section of the cabinet at the front section of the pod.

High Voltage Block Diagram



Video System

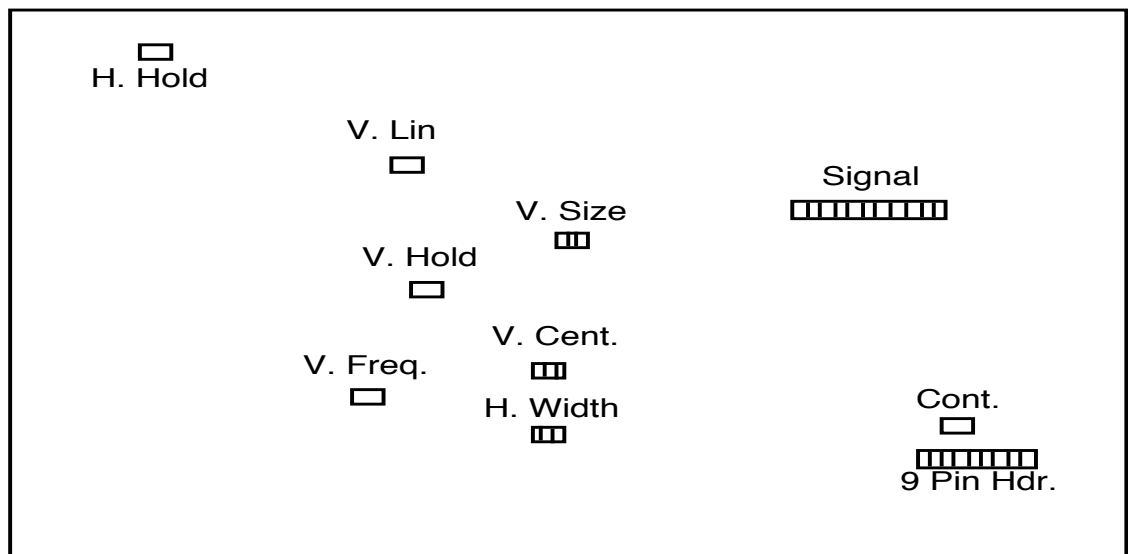
The Video System is divided into three units. Those being the Main screen, Secondary Screen, and Aux Screens. The Main and Secondary screens are powered off of the Power distribution box while the Aux. Monitors are powered off of the 12v Power supply.

The main screen derives its signal from a DB15 connector from the back of the PC from the division card. The Secondary screen gets its signal from the DB9 connector from the PC Video splitter card. The Aux. Monitors all get their signals from a DB25 connector from the PC Video Splitter Card. All five Aux. Monitors are driven off of the one DB25 connector.

You are able to adjust the Main and Secondary Screens from extension boards that are located above the Upper middle Aux. Monitor and below the External Remote I/O Display. The extension boards allow you to adjust the following: Brightness, Contrast, H. Hold, H. Center, V. Center, V. Width. However to adjust the Vertical Hold, Lin, you must adjust pots that are located inside the monitor itself.

Main and Secondary Screen Adjustment Positions

Monitor Circuit Board



Front of Display

Key

Header

Potentiometer

The Aux. Monitors are Black and White VGA monitors. The adjustments for these monitors are located inside the Aux. Monitor cases themselves.

Aux Screen Circuit Board

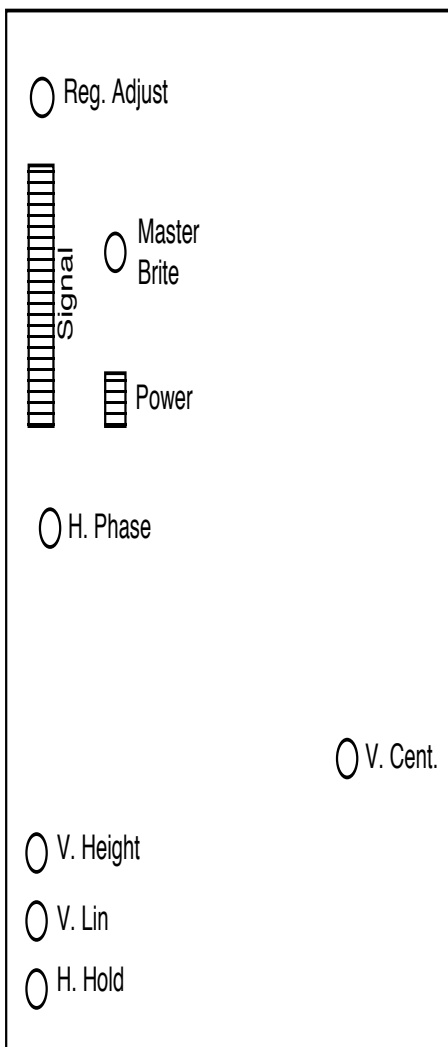
Key



Header



Adjustment Potentiometer



Front of Display

Each Aux. Monitor Case also contains a Button Board that handles the eight buttons located on the front of the case. When the case is right side up the button board is located on the top of the casing. The buttons on the aux monitor assembly are connected to this button board. The exact locations of each button on the button board is given in the button board section of this manual.

*****Warning***Warning***Warning***Warning*****

To adjust some of these pots and when checking Button Boards involves getting your hand inside the cases of the Monitors and can be extremely hazardous. Be Extremely Carefull and Take All appropriate actions that will minimize risk when handling these monitors.

*****Warning***Warning***Warning***Warning*****

Main Screen Monitor Adjustment Procedure

1. After adding the vidtest software to each of your pc's or using a diskette run the following Program: **divcal**
2. This will bring up a color bar for monitor adjustment on the Main Screen Monitor. Along the bottom right corner of the color bars you will find a black area with gray or dark gray bars within that area.
 - A. First adjust the Contrast all the way up.
 - B. Now adjust the Brightness so that you can barely see the second gray bar from the right.
 - C. Now adjust the Contrast down just till it disappears.
3. Hit the Escape key to get out.
4. Run the following program: **test**
5. This should bring up a red box with a yellow and black circle in the center.
 - A. Adjust the Horizontal Center until the black border is even on both sides.
 - B. Adjust the Horizontal Width to its fullest without distortions on the edges.
 - C. Now look at the circle in the center. You need to adjust the Vertical Height until the height of the circle is the same and the Width of the circle.
 - D. Now sit back in the seat and adjust the Vertical Center of the image until the image appears to be centered in the viewing window.
6. Hit the Escape key to get out.
7. Run the Animated Scene by typing **burnin**.
 - A. Now go back and adjust the Contrast and brightness to acceptable levels during the animated sequence. Please remember the darker the better but not to the point that you can't see down the corridor.

Aux. Monitor Adjustment Procedure

1. First Remove The Five Aux. Monitors from the Cockpit. Be sure to be careful not to stress or yank on the ribbon cable and powercable during removal of the monitors.
2. Using the Aux. Monitor Test Station hook up the video and power cables so that all five monitors are setting next to each other on your work bench.
3. From the Vidtest Directory run the following: **vpic** A screen will come up with a list of files. Select AUXCAL.PCX and hit Return or Enter. You should now see a test image appear on all of the aux. monitors.
4. At the rear of the monitor you will find a plate attached to the tube with a insulation pad attached. In the pad you will find a hole with a slot head screw in it. This is the Contrast Adjustment screw. Adjust this screw Counterclockwise till it stops. This should adjust the Contrast all the way to max.
5. On the test image you will notice a horizontal bar next to a small circle. This bar is used to gauge the proper setting for the brightness and contrast. You want to adjust the Brightness knob until the point where the bar goes from bright to dark is in the middle of the screen or under the x in the center of the screen. However you should still be able to see the points of the small circle.

6. Now adjust the Contrast Adjustment screw till the point that the circle starts to disappear but does not totally disappear.
7. Adjust the Horizontal Sync until the edges of the screen are even from the edge of the monitor.
8. Next take a business card. Using the corner of the card place it with the tip of the card in the angle of the x made in the center of the screen. Adjust the horizontal and vertical till the x in the center of the screen is square with the card.
9. Exit out of the program by hitting Escape twice.
10. Run a single player game from the pc and check to make sure that the images on the Aux. Monitors come up and look all right and with no distortions.

* This must be done to all five monitors. When you are finished adjusting the monitors sit back and look at all five. They should all match in brightness and contrast to each other. In other words no monitor should stand out from the group of five.

**** You might run across where one or more monitors have a darker or lighter filter than the other monitors. Keep this in mind when you place these in the pod.**

An example being:

You have 4 monitors with light filters and 1 with dark filter. Place the dark filter monitor in the upper center slot.

You have 3 monitors with light filters and 2 with dark filters. Place the 2 dark filter monitors on the lower right and left and the 3 light filters in the upper slots.

The whole point of this adjustment is to get a look of uniformity among all the monitors. This will help with image perception and should help keep the hurl factor (the opportunity to examine the liquid that we call lunch from an hour ago from being something to look at up close and personal) down to a minimum.

Sound System

The sound system includes the following: 2 AWE-32 Sound Cards, Amp Board, 4 tweeter Speakers, 4 Mid-Range Speakers, and 4 Woofer Speakers.

The two awe Sound Cards are located in the bottom or last two slots of the PC. Each card handles the front or rear sound for the cockpits. The two cards are set up differently strictly by how the jumpers are set on the sound cards.

The Amp board takes the output from the two AWE sound cards and amplifies the signal. It then takes the signal and sends it to one of four three-way crossovers that splits the signal from the Amplifier into three separate signals for the tweeter, Mid-Range, and Woofers.

The AWE Sound card are addressed differently so that they do not interfere with each other due to them being the same type cards in the same machine. The settings of the cards are as follows:

Front AWE:	220	H Address
	330	Port
	5	IRQ
	1	Low DMA Channel
	5	High DMA Channel

Rear AWE:	240	H Address
	300	Port
	7	IRQ
	3	Low DMA Channel
	6	High DMA Channel

The Amplifier that is mounted on the Sound Amp Board has a set of four RCA jacks for the inputs. You will also notice that there is an amplifier adjustment or volume adjustment. This Adjustment is to be set to the Minimum Value. The volume is controlled through the software and if not set to the minimum value then you will get a uneven sound setup in the cockpit as well as possible damage to the speakers. Also by jacking up the volume you can cause possible hearing damage to the customer. Additionally, it is important not to switch the front and rear outputs of the AWE's since the cards are tuned to the acoustics of the cockpit.

There are tests that can be run that are separate from the game software that will allow you to test and verify the sound system in the Pod. All of these tests are run from the Dos Prompt. The following is a list of the software and how to use them:

Chantest.exe: The test sequence is found in the C:\AUDTEST directory found on the hard drive of the pc. In this directory you will find an executable file called Chantest.exe. Simply type **Chantest** in order to start the software. What will happen is a menu will come up that will allow you to select for example Front Right or Front Left. The sounds you will hear will start as a low bass and work its way up to a high tone thus testing the woofers, mid-ranges, and tweeters. You can select Front right, left, center or Rear right, left, center to test each of the speaker sections.

Phaztest.exe: The test sequence is found in the C:\AUDTEST directory found on the hard drive of the pc. In this directory you will find an executable file called PHAZTEST.EXE. Simply type **PHAZTEST** in order to start the software. What will happen is a menu will come up that will allow you to select front or rear. You will hear a voice saying "In Phase" or "Out of Phase" followed by a "Noise". This is used to determine if the Speaker System is in Phase or out of Phase. What you need to listen for is when in phase the sound will appear to be in center and full range while the out of phase noise will sound off to one side or high and be less in intensity.

Diagnose.exe: This is a utility that is provided with the soundblaster AWE Sound Card that tests the cards directly. This is an executable file found in the C:\SB16 Directory named Diagnose.exe. Type **DIAGNOSE** to start the software. The software will prompt you for information pertaining to the card which has been listed up above in the paragraph dealing with AWE address. First it will ask you for the Address. Select 220 for Front Speakers or 240 for Rear Speakers. It will then ask for Port. Select 330. Even though the information above states 300 the Diagnose software will error if you try to select 300. It will then ask you if you wish to test Ram. The RAM test is usually skipped since there are few instances when the RAM will be faulty. The software will then ask you for the IRQ, Low DMA, and High Dma. They should appear highlighted as you go but refer to the above info if you are unsure. Once this is done the software will give you several types of Sound Tests to perform of your choosing. It is recommended that you use the 8-bit sound test. It will allow you to test right, left, or center while the other tests will not. In order to switch from front to rear or vice versa you will need to quit out and start again but with the info for which one you wish to test.

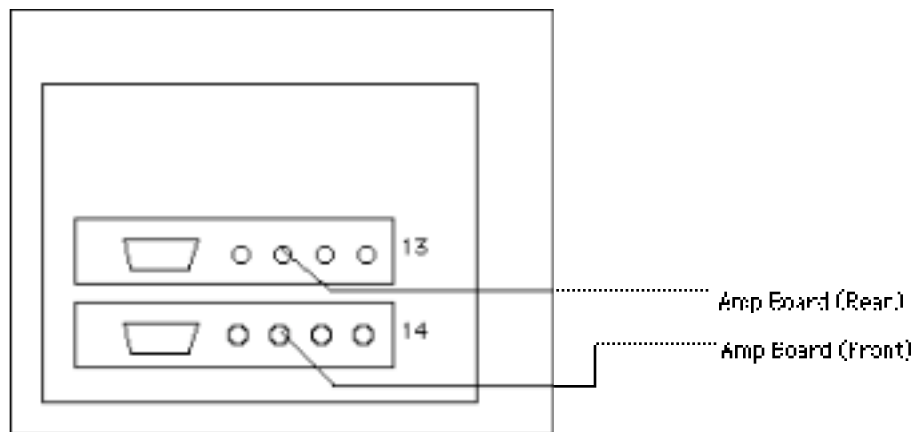


Figure ##

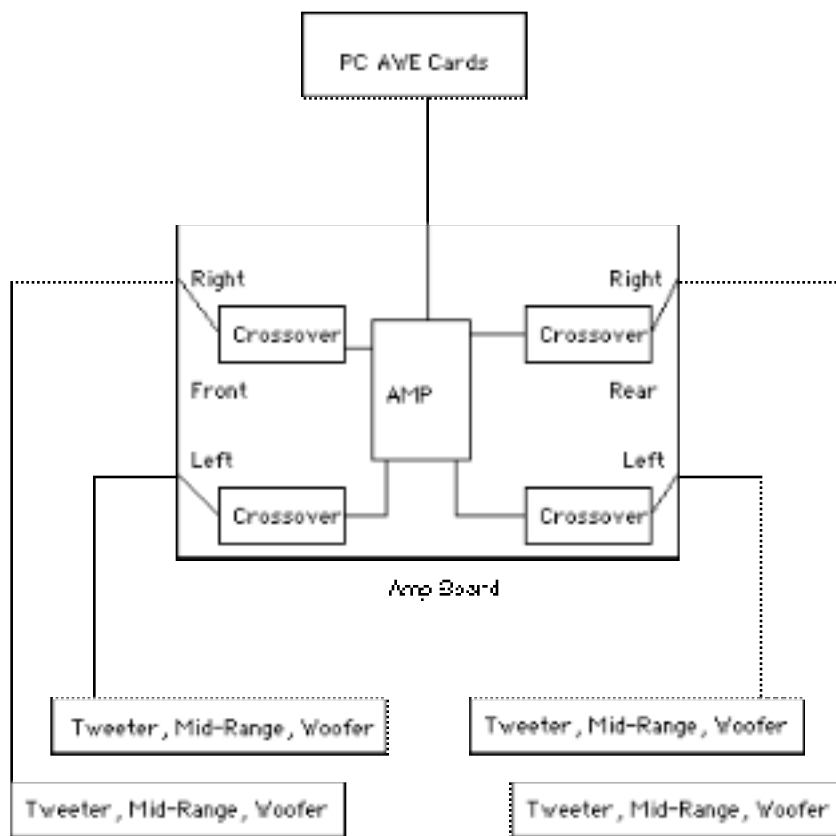
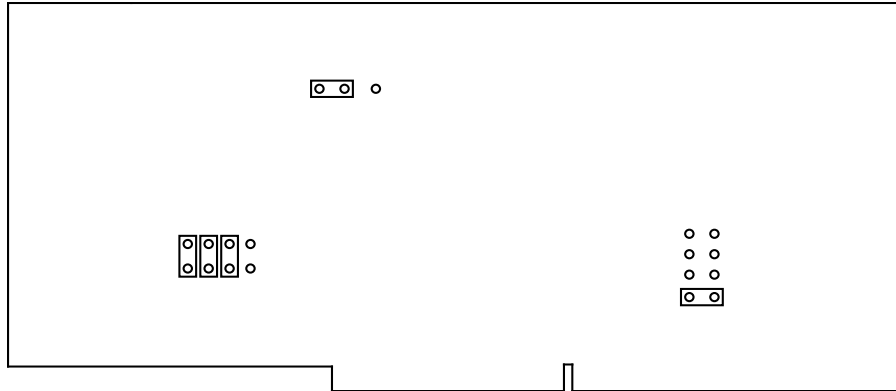
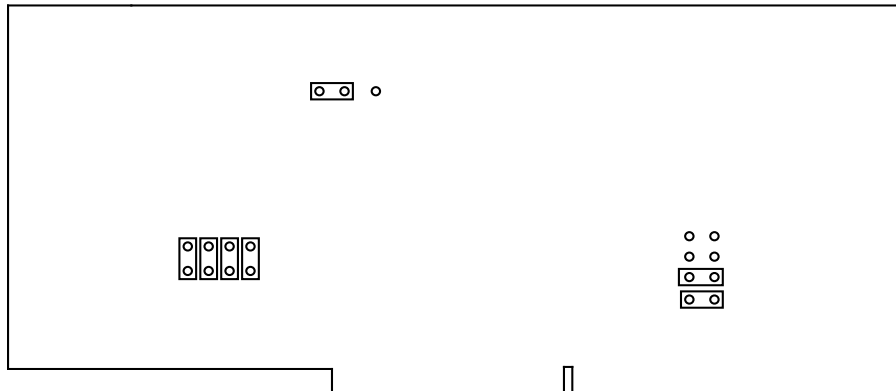


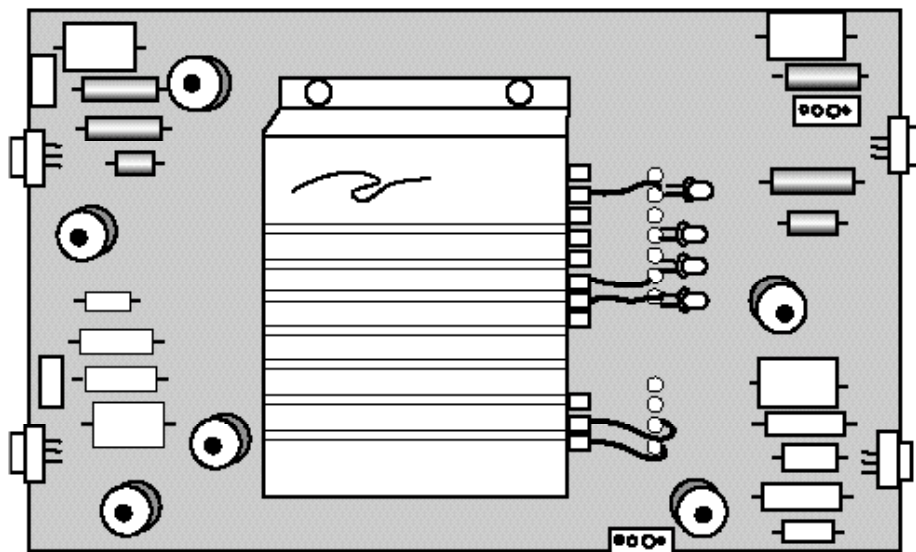
Figure ##



AWE - Rear
Slot 13



AWE - Front
Slot 14



Tesla Amp Board

Remote I/O

The Remote i/o board handles all of the controls and push buttons in the pod. It also handles the convenience light located at the throttle box. The remote i/o handles these devices through the use of Button Boards which are located in the Aux. Monitor cases and at the joystick and throttle locations.

The Button boards are connected to the Remote i/o through a 16 pin ribbon cable. The joystick, throttle, and foot pedals movements are measured by Optical Encoders which are connected to 4 pin connectors also on the Remote i/o Board.

The Remote i/o is driven off of the 5v power supply that is located in the lower section of the Front Cabinet. The button boards get their power through the Remote i/o.

The external display located in the upper middle panel of the cockpit interior is connected through a 14 pin ribbon cable.

The PC is connected to the board through a DB9 Connector on the board and goes to the Com1 port of the PC.

The two push button switches on the Board are for resetting and aborting the board.

SW1 = Reset

SW2 = Abort

There are five leds located next to the Reset Button that give a continuous status of the board. In normal operation the only leds that should be lit are the Green leds L1 and L4. When ever you push the reset SW1 you should see the yellow led L3 light up. Whenever there is a fault the Red Led L2 should light up.

L1 = Power on

L2 = Fault

L3 = Reset

L4 = Run

L5 = ?

The 16 pin connectors on the boards go to specific Button boards. Here is the list of which ones go to which button boards.

J11 = Bottom Right Aux Monitor button board (Aux 5)

J12 = Bottom Left Aux Monitor button board (Aux 4)

J13 = Secondary Screen button boards

J14 = Upper Aux Monitors button boards (Aux 1, 2, 3)

J15 = Internal Keypad

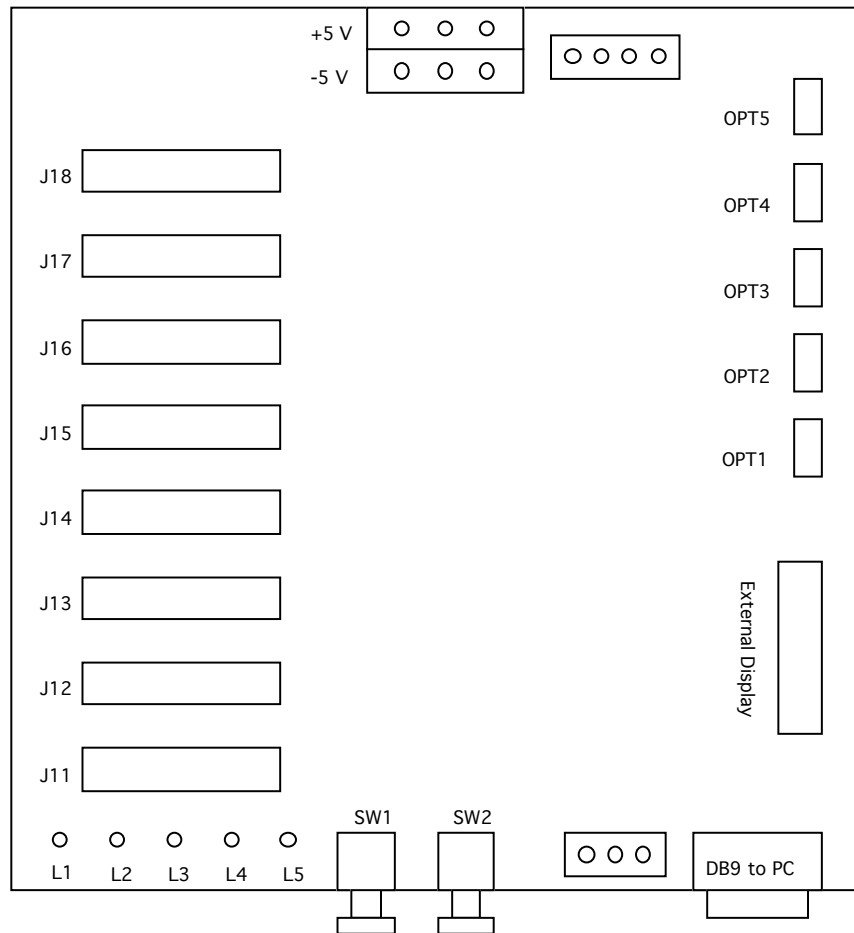
J16 = External Keypad

J17 = Throttle Button Board

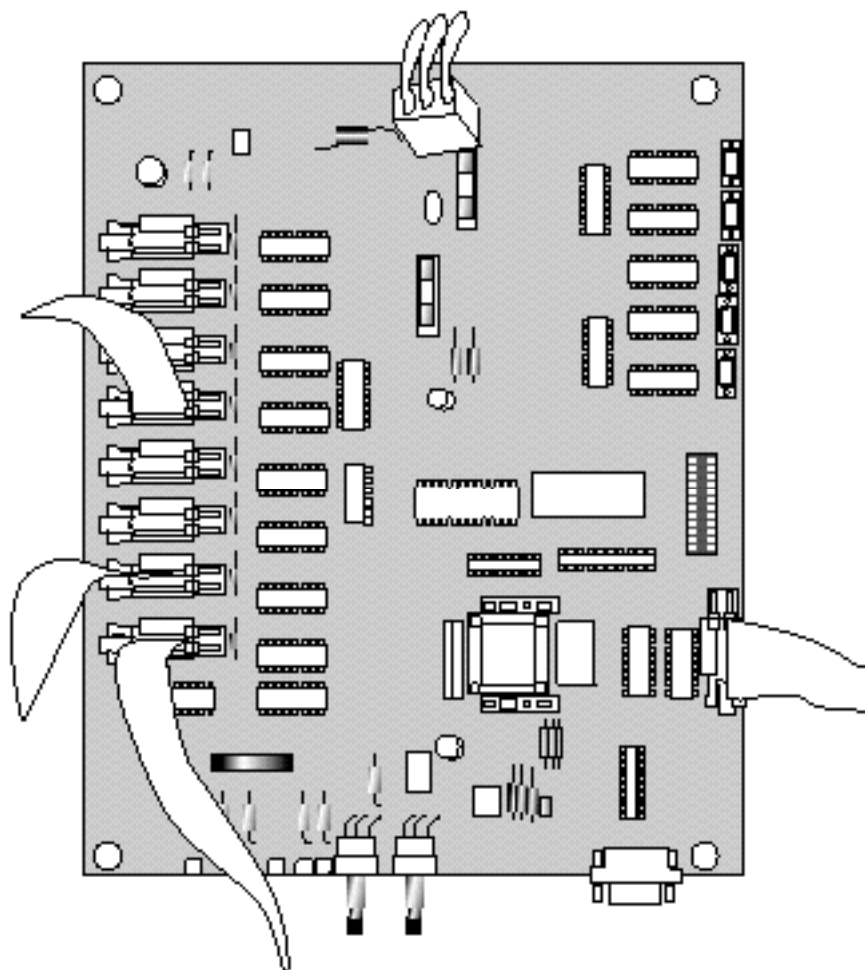
J18 = Joystick Button Board

The 4 pin connectors on the Remote i/o board go to specific Optical encoders. The following is a List of those Connectors.

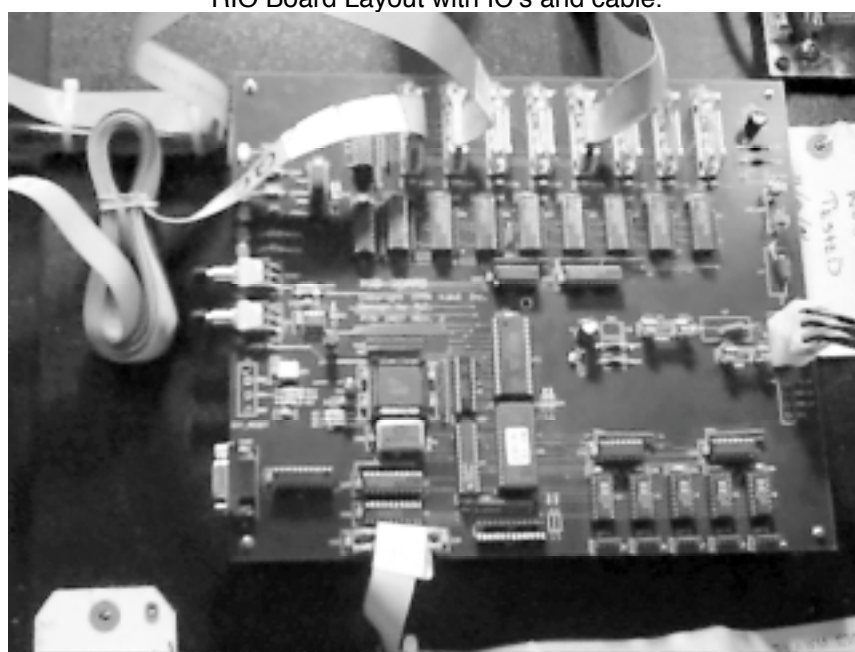
- Opt 1 = Left Footpedal
- Opt 2 = Right Footpedal
- Opt 3 = Vertical Joystick
- Opt 4 = Horizontal Joystick
- Opt 5 = Throttle



RIO Board Diagram



RIO Board Layout with IC's and cable.



Tesla RIO Board

Button Boards

The button boards handle the buttons and switches located throughout the pod. These boards are directly connected to the remote i/o board through the 16 pin ribbon connector.

The 4 pin connectors located at the top of the board are directly connected to the buttons and switches. However the Connectors are numbered in the opposite direction of the Hex numbers associated with the board. An example being J10 = Hex 00 while J3 = Hex 07.

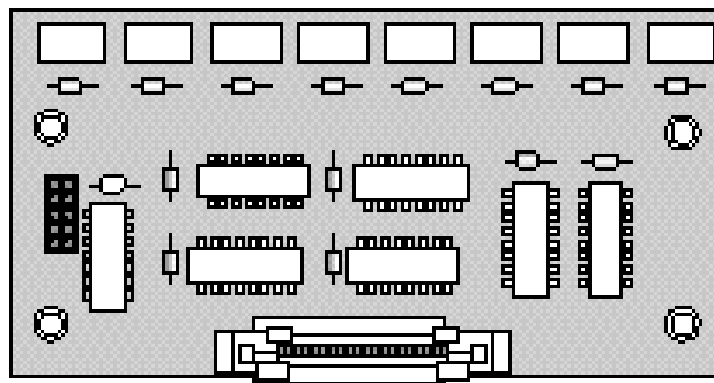
The Address selection is a jumper that is placed over two pins on the selection row to indicate which board is being address per ribbon cable. Therefore if there is only one button board on a Ribbon Cable then the address would be A0. There are only two multi Board ribbon cables and they are for the Secondary screen and the Overhead Aux. Monitor Button Boards.

The secondary button boards are address as follows:

- A0 = left side button board
- A1 = Right side button board

The overhead button boards are addressed as follows:

- A0 = Upper Center Button Board.
- A1 = Upper Left Button Board.
- A2 = Upper Right Button Board.



Tesla Button Board

B. Joystick Button Board

The button board for the joystick handles the five buttons and the four hat positions. The locations for the Joystick connectors to the button board are as follows:

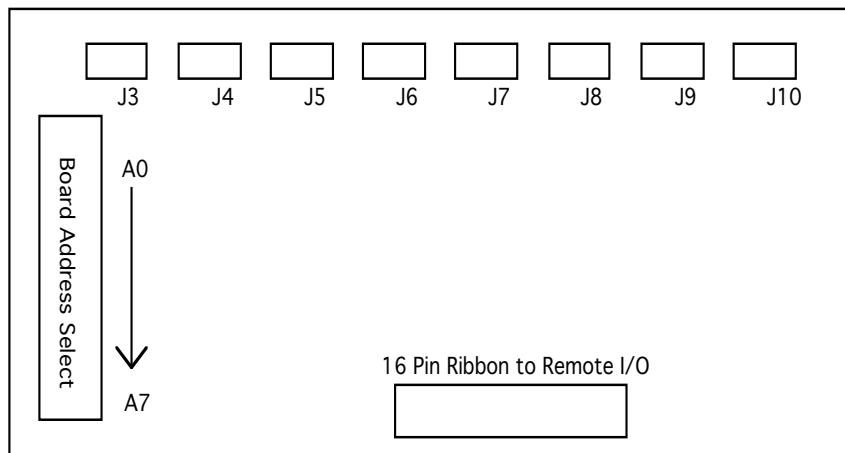
J3	=	White	=	Address \$47
J4	=	Grey	=	Address \$46
J5	=	Green	=	Address \$45
J6	=	Purple	=	Address \$44
J7	=	Blue	=	Address \$43
J8	=	Yellow	=	Address \$42
J9	=	Orange	=	Address \$41
J10	=	Red	=	Address \$40

C. Throttle Button Board

The throttle button board handles more than just the throttle reverse button. It also handles the Convenience Light, Panic Button, and Door Switch. The connectors should be as follows:

J3	=	Throttle Button	=	Address \$3F
J4	=	Convenience Light	=	Address \$3E - Only if button hooked up.
J5	=	Panic Button	=	Address \$3D
J6	=	Door Switch	=	Address \$3C
J7	=	Future Use	=	Address \$3B
J8	=	Future Use	=	Address \$3A
J9	=	Future Use	=	Address \$39
J10	=	Future Use	=	Address \$38

On J4 the convenience light is hooked up to the two leads for 5v power to the bulb. You will not be able to get a address to show up for this jumper unless you unplug the light and plug in a button to active it during a Diagnostic Push Button Test.



Diagnostics

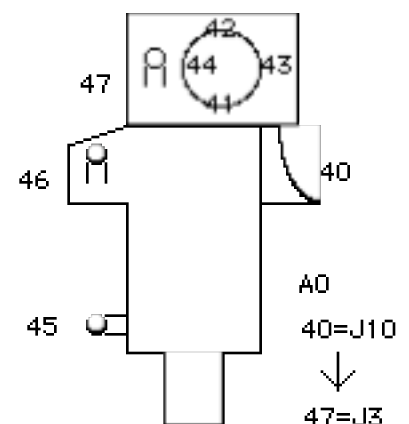
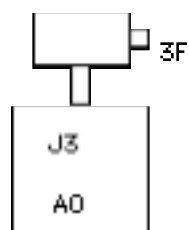
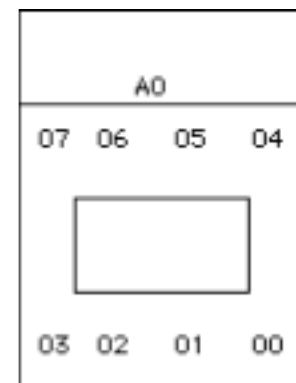
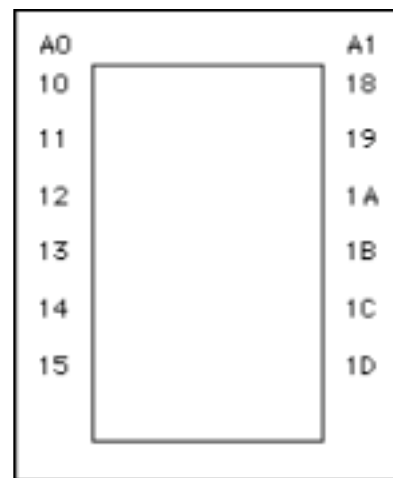
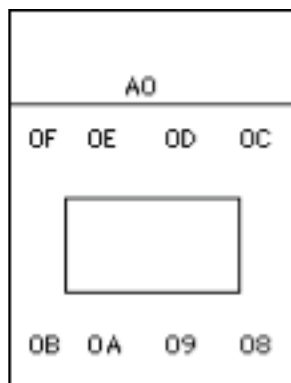
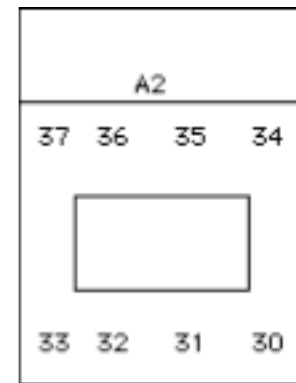
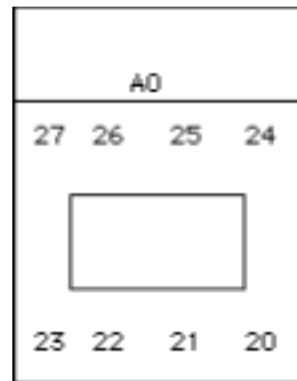
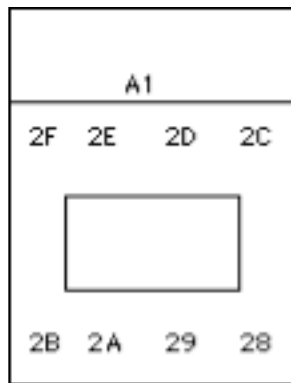
The Diagnostics work much the same as the 2.0 - 3.0 Pods. A code is entered that will put you in the Diagnostic mode. This code is currently A9E. In system 4.0 this code is supposed to be changable by Site Management.

Pressing the code on the keypad inside the cockpit, located on the upper middle panel, will enable you to enter into a diagnostic test mode. The Remote i/o display should now read F1000000. You now have several options which check the function of the cockpit controls. To access the desired function, enter any one of the following into the keypad after entering A9E.

- 1 - Throttle
When pulled all the way back, Display will read: 01000XXX
When pushed all the forward, Display will read: 01000XXX
- 2 - Left Foot Pedal
When idle, Display will read: 02000XXX
When floored, Display will read: 02000XXX
- 3 - Right Foot Pedal
When idle, Display will read: 03000XXX
When Floored, Display will read: 03000XXX
- C - Joystick (Vertical)
Pushed to down position, Display will read: 0C00XXXX
Pulled to up position, Display will read: 0C00XXXX
- 4 - Joystick (Horizontal)
Pushed to right position, Display will read: 0400XXXX
Pushed to left position, Display will read: 0400XXXX
- 5 - Push Button Test
Display will read: 050000XX
This test will give the Hex equivalent for that Button.
Please refer to Button Hex Designation Figure for specific button hex numbers.
- 6 - Lamp all Test (Bright)
Display will read: 06000003
This will light up all lamps to bright level 3.
- 7 - Lamp all Test (Dim)
Display will read: 07000001
This will light up all lamps to bright level 1.
- 8 - Second Keypad Test
The Display will read: 08000000. Pressing the keys on the second keypad will alter the last two digits in this display.

To exit out of a test, Press F. This allows you to enter into another Diagnostic function. When F is pressed, Display will read: F1000000.

To exit out of all of the tests and allow for normal game operation, press D. When D is pressed, the display will read: F0000000 if everything is in order. If errors in transmission have occurred, then the display will read: E000XXYY. In this case, XX refers to the number of abandoned messages, and YY indicates the number of recent retries.



AX =
 Button Board Address
 JX = 4 pin connector on Button Board

PC

A. Discription

The PC is the heart of the 4.0 Cockpit. Without it there would be nothing to do but look at all the shiny red buttons...The Candy Like Buttons... THE... (But I digress).

The PC contains all of the software and interfaces with all the sub systems of the pod from the sound, Remote i/o, to video.

The Main Screen is driven off of the Division card located inside the PC (Refer to Figure ## Slot 11). The Secondary and Aux. Monitors are driven off of the Video Distribution Card (Splitter Card for short). The Secondary is connected to the DB9 port of the splitter card (Figure ## Slot 10) while the 5 Aux Monitors are driven of the one DB25 pin connector (Figure ## Slot 10).

The Sound System is driven off of the 2 AWE sound cards located also in the PC expansion slots (Figure ## Slot 13 - Rear, Slot 14 - Front). The cables to the Amp board come from the Line out port of the Sound Cards or the Third hole down from the top of the cards.

The Remote I/O board is connect to the PC through Com1 (Figure ##-5).

The Plasma Display is connect to the PC through Com2 (Figure ##-4).

Power to the PC is connect to the Power Distribution box through a Universal Power Cord commonly used by most computers. (Figure ##-1).

The Ethernet network is connect to each Pod at the Ethernet Card (Figure ##-8). The Ethernet connector is a RJ45 connector using the standard pins (1,2,3,6).



Tesla PC, Cover removed.

Rear View of PC

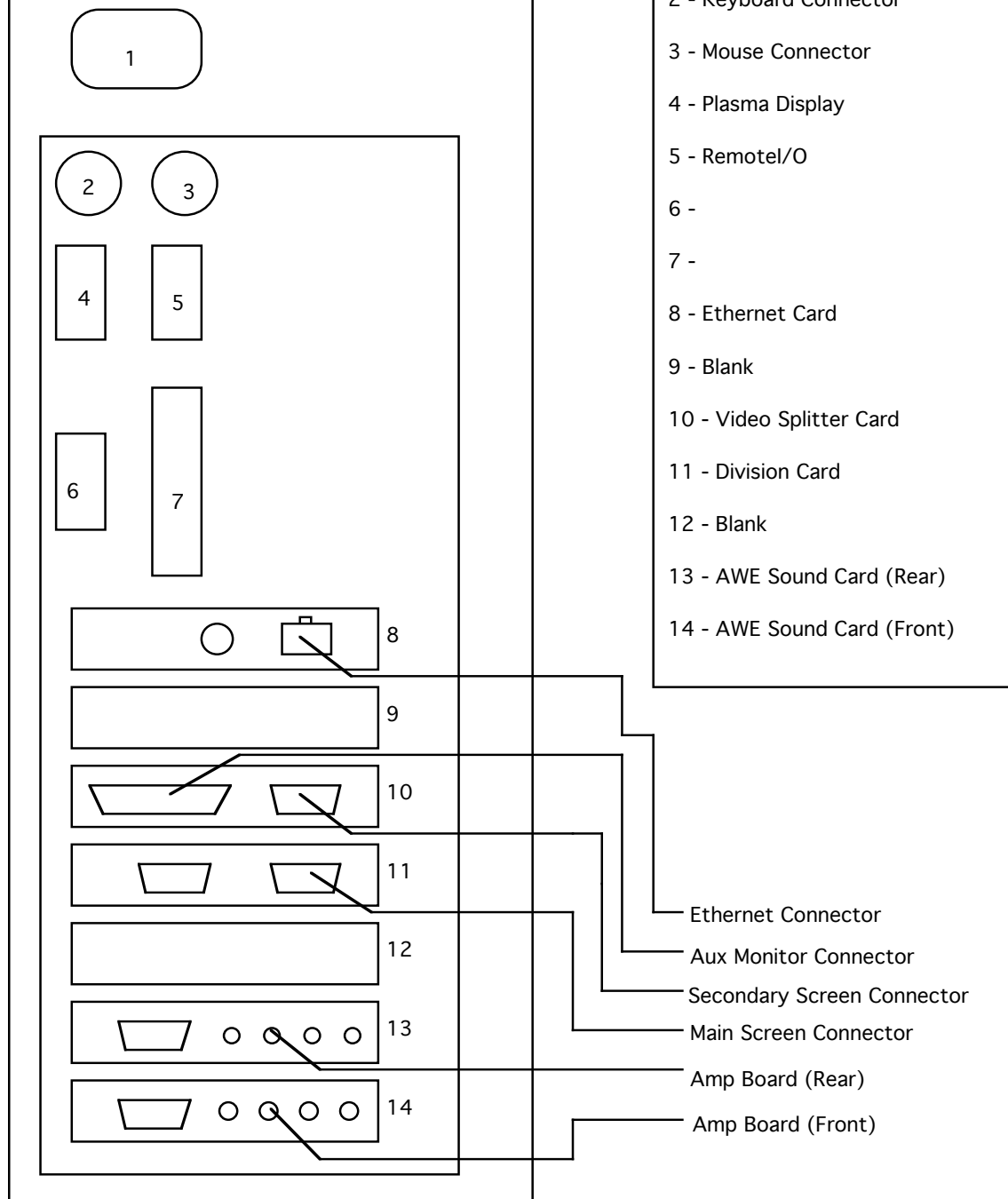
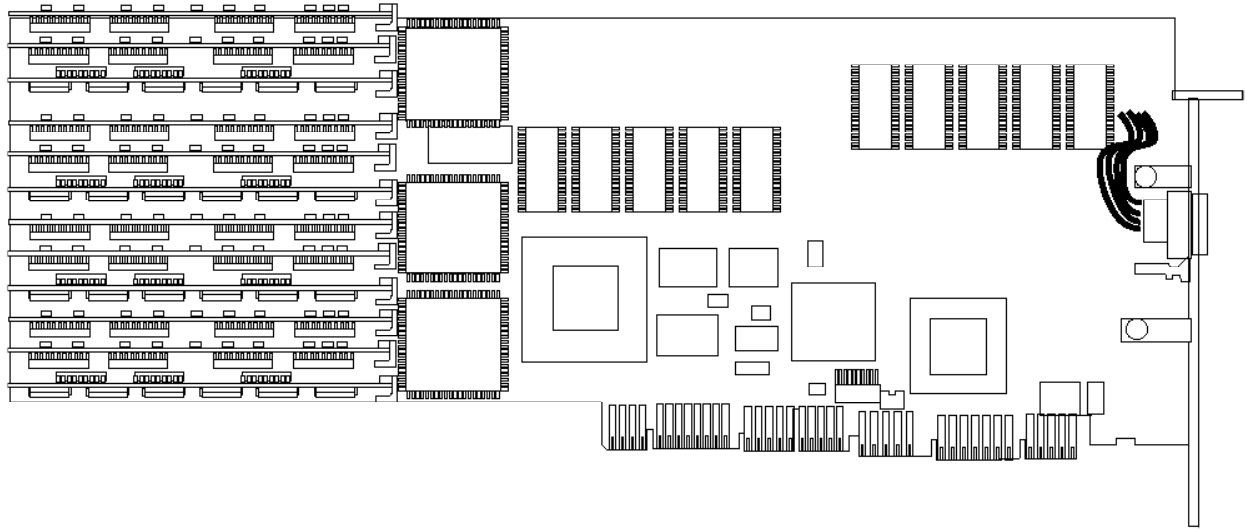


Figure ##



Division Ltd. Main Video Card

B. Network Setup

Step 1

After rebooting the pc you will notice in the right hand bottom corner of the screen a message that reads - "To Setup Press.....[F1]". When you see this message **hit F1** on the keyboard.

You will now see the CMOS setup come up on the screen.
This is to Verify only. The setup should already have been done before the CPU was sent to the Field.

1. Page down twice to the third page using the **PAGEDOWN** key.
2. Using the arrow keys move to the PCI Device selection area.
3. Make sure the PCI Device window reads **PCI SLOT 1**.
4. Make sure "Enable Device" reads **Enable**.
5. Make sure "Device IRQ" reads **IRQ 15**.
6. Make sure "Enable Master" reads **Enable**.
7. Hit the "**ESC**" key on the keyboard.
8. Hit "**F4**" to save and reboot.

After the reboot is complete you will come up to the DOS prompt. Do the following:

1. Type "**Setup**" at the prompt.
A networking setup menu system should appear on your screen.
2. Using the arrow keys select "**Networking**" and hit the "**Enter**" key.
3. Using the arrow keys select where it says "**none**" under "**Primary Network Interface Card**". Change "**none**" to "**Linksys Ethernet PCI**". Make sure that the type of frame used are both 802.3 and Ethernet II.
4. Using the arrow keys select "**Servers to Connect to**" and hit the "**Enter**" key.
5. Remove the first two checkmarks so that only **Personal Netware** is checked.
6. Under the checkmark type the name of the set. ex. **ALPHA**.
7. Select "**Accept the above and continue**" and hit "**Enter**".
8. Using the arrow keys select "**Network Management**" and hit the "**Enter**" key.
9. Remove all checkmarks and select "**Accept above and continue**" and hit "**Enter**".
10. Using the arrow keys put a checkmark in the Box next to "**Share this Computer's Resources**".
11. Under the box type in the pod Name or #. ex. **ALPHA_8**.
12. Select "**Accept the above and continue**" and hit "**Enter**".
13. Select "**Save changes and Exit**" and hit "**Enter**".
14. Select "**Exit to Dos**" and hit "**Enter**".

Reboot The Computer

After the reboot process it should ask "**Load Network Software (Y/N) ?**"
Hit **Y**.

You should be back into the setup program. There will two Selections.
Select "**Continue with First Time Setup**".

* If setup program does not comeup type the following Command at the prompt "**Setup /First**".
Then Select "**Continue with First Time Setup**".

The program should list available workgroups such as **ALPHA**. If you don't see a workgroup name and there is already a machine on the network setup check your connections to be sure you are hooked up to the network properly. If there are no workgroups set up yet you will need to create one by typing in a name such as **ALPHA**. You should only have to do this for the first machine you are loading on the network.

Select Join Selected Workgroup.

You should now see **ALPHA_#_DRVC** followed by a box with a checkmark.

1. Change **ALPHA_#_DRVC** to **ALPHA_#**.
2. Arrow down to LPT1 and LPT2 and Remove the checkmarks.
3. Select "**Accept the above and continue**"
4. **Save changes and Exit.**
5. Hit **OK**.
6. Hit **OK**.

You should be back at the Prompt.

1. Type **cd \nwclient**.
2. Type **edit startnet.bat**
3. Check to see if "**LH DC21040**" is present in the file. If not add it.
4. Hit **ALT-F** and Select **Save**.
5. Hit **ALT-F** and Select **Exit**.

You should be back at the Prompt.

1. Type **Net Admin**.

You will see a screen with a list of servers for the workgroup.

1. Using the arrow keys select the Pod # you are working on. Ex. **ALPHA_3_PC**.
2. Hit **F3**.
3. Remove the "**_PC**" so that it reads "**ALPHA_#**"
4. Hit **ESC** key.

You should be back at the prompt.

1. Type **Net**.

You should be logged into the workgroup. If not do the following:

1. Select the Server. Ex. Alpha_#.
2. Type **Supervisor** for username.
3. Skip the password.
4. Check the box for Join Workgroup.
5. Hit **OK**.
6. Hit **ESC** key.
7. Hit **OK**.

Now go to the tech pc with the software installed on it and do the following.

1. Make sure the laptop is logged into the workgroup using the net command.
2. Type **net vlist** to make sure the other server is visible on the network.
3. Type **cd \system4**.
4. Type **Update Alpha_#**. Ex. Install Alpha_8.

It will begin to load the software onto you Pod Computer.

Included with your tech computer are several batch files which update the software in the cockpits, cameraships, and whole sides. Listings of these files are included in Appendix 1.

***** If at anytime you have a problem immediately call Site Service Support to help you with rest of the way. If you don't things can get really messy!!!! *****

Plasma Display

The plasma display is used for identification of the pod for the pilot so that the pilots knows which pod is assigned to him. The plasma display is controlled by the PC through the Com2 serial port. This is connected by a cable (40-3320-04) to a DB9 connector on the Plasma Display.

Power is supplied to the plasma display by a 4 pin connector from the 12V power supply.

Testing of the plasma display can be done in two ways:

1. Software
2. Hardware

Software Test: There is software independent of the game software to test the plasma display. Go to the **C:\PLASMA** directory on the game pc and type **TEST.BAT**. This should put up a cool looking display that should indicate if the display is working correctly.

Hardware Test: Hardware tests can be accomplished by moving the jumper on the back of the plasma display from position 2 to position 6. This will run a diagnostic mode on the display. You should see lines move from left to right, top to bottom, fill screen, clear screen, etc. Remember to move the jumper back to position 2 when you are finished.

PLASMA DISPLAY INFO

Jumper on pin 2

```
At C:\>
type "CD PLASMA"
C:\PLASMA>
type TEST
display "CTHULHU" "Sarcophagus"
```

TEST.BAT = Plasma com2 cursor off image ethulhu.pcx

Quickmail

Also included in the VWE Software release is a copy of Quickmail, or QM for short. QM is an electronic mail (E-mail) system for the Macintosh and has been chosen by VWE to help reduce the paperwork normally sent back and forth to the centers. QM will have the capability to 'enclose' other documents with the messages sent to other parties. QM is very user friendly and the user utilizes a simple point and click interface to operate the program. By using QM, each center will be able to communicate not only with the three corporate offices of Chicago, Glendale and Burbank, but also with other centers. This feature will facilitate the coordination of SiteLink games in the future.

With the implementation of QM to the centers, the majority of functions taken by ARA will no longer done through ARA. Faxes between offices and future software transfer will be done using QM.

When installed, QM will consist of two parts: The Quickmail Administrator and the Quickmail Server. The QM Administrator is used to maintain mailcenters which store, forward and transfer the mail messages and additional files to the other mailcenters on other QM Administrator computers. The QM Administrator must be running on the machine with the modem. The QM Server is the program which is responsible for receiving and sending mail to the local mailcenter and can be installed on any computer connected to network with the QM Administrator machine. QM server is responsible for the notification of the user that mail has come in. Normally, most people will only use QM server and the QM administrator will run in the background of the office computer.

The QM Administrator

When running, the QM Administrator looks like this:

The screenshot shows the QM Administrator window with the following sections:

- Status:** idle
- Administrator:** Connection: (None)
- Time:** 6:43 PM
- Disk Space:** 10803K
- Memory:** 461K
- Dead Mail:** 0
- File Based Server:** not active
- QM Server:** [Empty text box]
- NameServer:** 4 of 1000 names
- MailCenter Table:**

MailCenter	Type	Next Connection	Waiting	Urgent	Status
CHICAGO_SITE	Online				
CHICAGO_SITE_	QM-QM	4/16/94 3:00 AM	0	0	

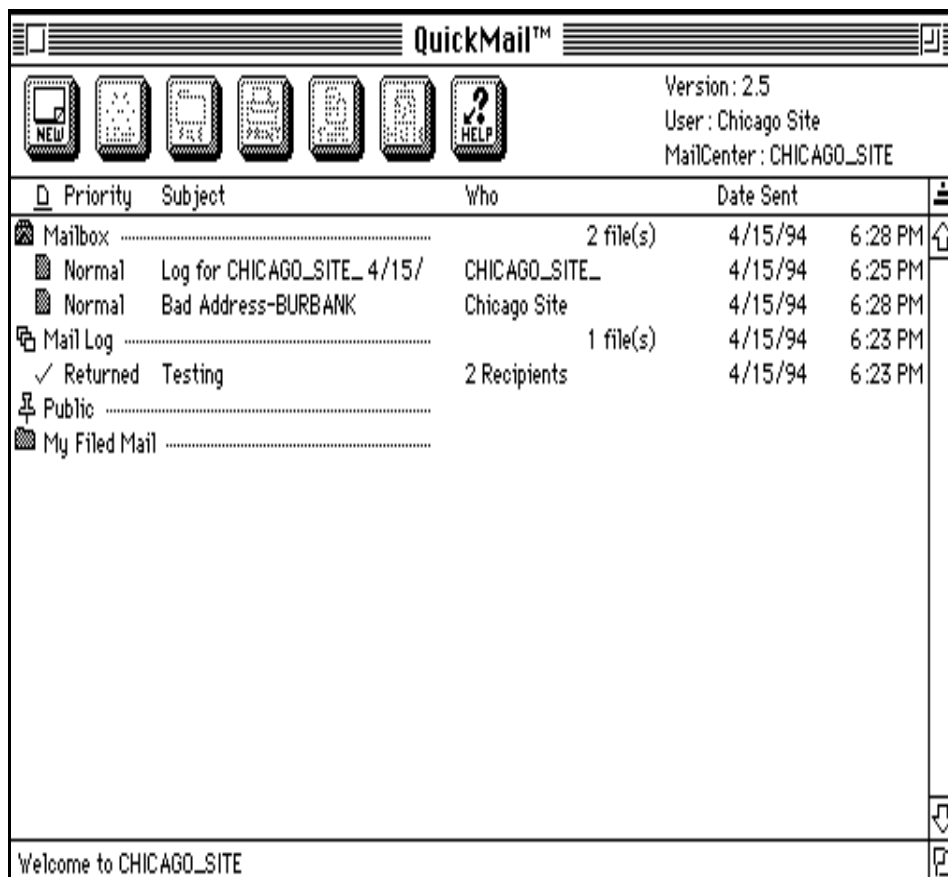
Notice that there are two mailcenters shown. The first mailcenter (CHICAGO_SITE in this case) is the on-line mail center. This mailcenter is used to route mail within a site. Initially, there will only be two users in the local mailcenter: The general site address and the technical site address. It is currently not possible to give every employee a unique address on the e-mail system due to licensing considerations. Expansion of the local addresses may occur in the future. The second mailcenter (CHICAGO_SITE_) is the QM-QM bridge mailcenter. It is this mailcenter where all the addresses which are outside of the site are stored. This mailcenter will deliver messages to the other sites and to the corporate offices. The QM-QM bridge will connect to the other sites each evening on the time under the 'Next Connection' column of the QM Administrator window. It will also dial out if there are 'urgent' messages in the mailcenter queue. The QM Administrator will also dial out when there are many messages in the queue, or when forced to by the operator. Generally, it is best to let the program send the messages automatically.

It is important to let QM Administrator run constantly if you are to receive all messages in a timely and reliable manner. It is also impossible for QM Server to connect to the mailcenters if the QM Administrator is not running. For this reason, the QM Administrator will be installed to run when the office computer is turned on. It is okay if you hide the program under the finder. I will run just fine in the background.

The maintenance of the mailcenters is done locally and your head tech will be the QM custodian. A copy of the QM documentation will be sent to him in the future. Any questions dealing with QM can be asked to VWE Field Support.

QM Server

QM server will be installed on the office computer and on the technicians computer. This program will reside in the apple menu on those two computers and will look like this:



On the top of the program menu are seven major buttons which cover the basic functions of e-mail. Next to the operations buttons version number of the program, the user logged into the mailcenter and the mailcenter logged into. Immediately below the program buttons are headers showing the properties of the mail. These include the icons, the priority of the messages, the subject of the message, who sent them and the time and date the message was sent. All icons which are not shadowed have information contained within them which has not been examined previously.



The first icon will show the mailbox. The mailbox can be double clicked to reveal the messages inside. It cant hen be double clicked again to hide the messages. Beneath, the open mailbox any messages which have been received by the QM Server. Message may then be highlighted and double clicked to be read. An alternative is to highlight the message and to click on the 'Read' button on the top of the window. To close the message, click on the close box on the top right hand close box on the window. The message will still remain in the mailbox until it is deleted. Messages may be deleted by highlighting the message and clicking the delete button on the top of the window. Any open message may be printed out by clicking the 'Print' button. Highlighted messages may be deleted by clicking the 'Delete' button on the button bar. Highlighting a message and pressing the 'File' button will place the message in the folder 'My Filed Mail' for future reference. QM Server also has an extensive on line help

utility which can be accessed by pressing the 'Help' button. There is a folder called 'Mail Log' which stores all messages sent by this user. It is important to periodically check and clean out this folder to prevent the buildup of old files on the QM Administrator's machine's hard drive.

Creating and sending a message is done by clicking on the 'New' button on the button bar. Once the 'New' button is clicked a dialog box will come up showing the various forms available for your messages. Most of your messages will be using the 'Memo' form and this form looks like this:

Memo

Normal FILE PRINT SAVE DELETE ENCL CLIP REC OFF RECPT SEND

FROM: Chicago Site
TO:
CC:
BCC:

Subject:

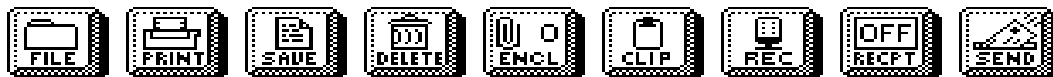
Time: 6:47 PM
Date: 4/15/94

OFFICE MEMO

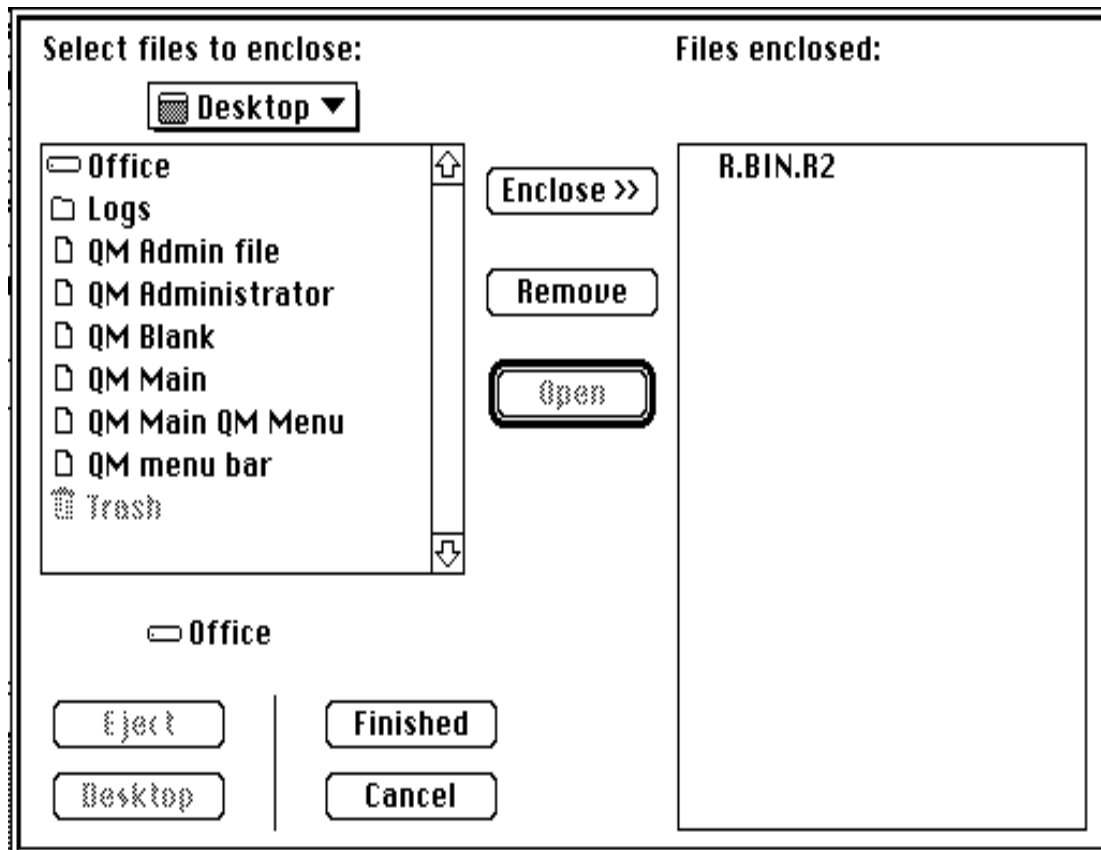
The memo form consists of the priority button, the command buttons, the distribution box, the subject field, the date/time stamp, and the text field. By clicking on the various fields, the contents may be manipulated. All messages must have a subject. To send the message, click the distribution box. A window showing the various addresses will be shown:

Highlight and drag the recipients to the appropriate boxes on the right side of the window. To remove someone from the distribution box, drag their name to the garbage. After the distribution list is done, click 'send' if your message is ready to send or 'OK' if you have more to write. After you have finished writing, you can click the 'Send' button to send your message.

The priority of your message may be changed by clicking the priority bar on the top of the message form. All messages will be distributed by priority, with 'Urgent' the most important and 'Bulk' the least. 'Urgent' messages will normally be sent within 10 of being sent by QM Server.



Most of the command buttons on a form are self-explanatory. Several need explaining. The 'Enclose' button allows users to send other documents or files with their messages. When clicked, the enclose button brings up the following window:



To enclose a file locate the file on the window on the left and highlight. Enclose the file with your message by clicking the 'Enclose >>' button and click 'Finished' when done. When this is done, everybody who will receive the enclosed file. To recover an enclosed document, this process is reversed: The message is accessed, the 'Enclose' command button is pressed, the enclosed file is selected as is the destination, and the 'Retrieve' button is clicked. When this is done the enclosed file received will be retrieved.

The 'Record' button brings up a window much like the record sound window when the sound control panel is brought up. This allows voice messages to be enclosed with your messages. Including voice messages should not be done since the sound files may be very large and this may take the modem excessive time to transfer the sound file.

The 'Receipt' button turns on the receipt function. If this function is turned on, when the message is received and read, a receipt is sent back to the user.

On the top menu bar is a pull down menu labeled 'Quickmail.' The 'Quickmail' menu deals with the maintenance of the QM Server. This menu bar and all the other features of the QM server program are available on the on-line help utility.

Retrospect

Description

Retrospect is the software package used to do the nightly backups and network backups done at each site.

Setup

In order to setup the backups you need to make sure that the retrospect software is on the computer that has the tape device connected to it and that each of the remote computers has the retrospect remote in the control panels.

You now have to setup the remote devices so that you will be able to backup from them. This will involve having the Serial Numbers for retrospect handy. Do the following to configure the remotes.

- 1) Select Configure from the left hand side of screen.
- 2) Select Remotes from the right hand side of screen.
- 3) Select Network
- 4) Select the remote to install
- 5) Enter the Serial Number for the Authorization Code.
- 6) Enter the name of the Remote.
- 7) Enter Nothing for the security.
- 8) Make sure the volumes are highlighted that you wish to be able to backup from.
- 9) Select Done.

Do this for each remote. This will allow you to select any of these to be able to do backups.

Cataloging a New Tape

You need to have a Storage Set or Catalog for each tape. Therefore you need to create a catalog for each tape that you are using for nightly backups. Here is how you set up a Catalog.

- 1) Select Configure from the left hand side of screen.
- 2) Select Catalog from the Right hand side of screen.
- 3) Select Create New.
- 4) Enter the name of the Catalog. Ex. For Fridays tape enter Friday.
- 5) Select Save.

Do this for each tape.

Backing up

Below is a procedure that was written for doing a Manual Backup.

- 1) Make sure all computers that you wish to do backups of are up and running with no applications running.
- 2) On the server quit out of the 4D application. It will ask how long for disconnection. Enter 0 min. and hit ENTER.
- 3) Select the "Retrospect" Icon under the apple menu using the Office Computer.
- 4) Click on the "Immediate" Icon on the left hand side of Retrospect Window.
- 5) Click the "Backup" selection on the right hand side of window.
- 6) The new window should show each of the computers that are installed on the network of the Las Vegas Site.
- 7) Select the "volumes" or systems you wish to backup.
ex. "Res Server"
- 8) After clicking "OK" the new screen will show the possible destination volumes. The one that should be used is named after the tape you are using. EX. If it is backups for Monday then select the Monday destination and be sure you are using the Monday tape.
- 9) After clicking "OK" the application should start scanning the computers you have selected. After scanning you will have to select backup again and then it will ask you if you will wish to execute. Hit "OK"
- 10) If you are doing a full network backup it will take 2-3 hours. if you are doing the nightly backup it should take 15-30 min. Do not leave the computer until you see a bar graph and the fact that the computer is now copying to the tape.

Restoring

Restoring is much like doing the backup only in reverse. The source being the catalog of the tape. The Destination being location you want the files to be placed.

- 1) Select Immediate from the left side of the screen.
- 2) Select Restore from the right side of the screen.
- 2) Select Restore and not search.
- 3) Select the storage set to restore from.
- 4) Select the destination to restore to.

If you wish you can set the criteria so that only selected files are restored. Else you proceed with the restore.

Restoring from a Tape with no Catalog

In order to do a restore you need to have a catalog for the tape. If you have received a tape in the mail with instructions to restore its contents to your hard drive this is how you do it.

- 1) Select Tools from the left side of the screen.
- 2) Select Repair from the right side of the screen.
- 3) Select Recreate from tapes.
- 4) Select the tape that you are trying to catalog.
- 5) Select "NO" unless the type was sent you stating it was encrypted.
- 6) Select Save.
- 7) It will now begin to scan the tape and create the Catalog.
- 8) When it asks you to insert tape-2 click on Choices unless there is a second tape.
- 9) Select Done.

You now have a Catalog of the tape and can do a Normal Restore following the steps above for Restoring.

Writing Script Files

Script files are used for doing automatic backups. These scripts can be used to do the nightly backups. Below is a run through on how to set up the scripts for nightly backups.

- 1) Select Scripts from the left hand side of the screen.
- 2) Select Edit from the right hand side of the screen.
- 3) Select New.
- 4) Select Backup.
- 5) Enter the script name then select new.
Ex. If the script is for Friday backup name the script Friday.
- 6) Select Sources
 - 1) Select Add.
 - 2) Select the Device you wish to back up. Ex. Res Server
- 7) Select Destination
 - 1) Select Add.
 - 2) Select the Catalog to use. Ex. Friday Script use Friday Catalog.
- 8) Select Schedule
 - 1) Select Add.
 - 2) Select Day of week.
 - 3) Set the time in the am you wish the back up to start.
 - 4) Set the day to run on.
Ex. If you wish to backup Friday then select Saturday and set the time to 1:00 am so that the backup of Friday is done Saturday morning.
 - 5) Select OK

After completing the script for each day all you have to do is make sure the correct tape is in the tape device for that day.

Note: The backup will not run if the wrong tape is in the machine. It will wait until you put in the correct tape for the backup.

Timbuktu

Description

The Timbuktu program is an application which allows users to take control of another computer on the same network. This is especially useful with the mission review and res server computers because they do not normally have a keyboard or mouse connected to them.

Using Timbuktu

Other computers can only be accessed through Timbuktu with passwords which the managers and technicians have. Normally, Timbuktu can be started using the Apple menu. Once the program has been started, a dialog box listing all of the computers that can be connect to, should be displayed. If that dialog box is not present, that using the menu at the top of the screen, choose the 'File/New Connections' selection.

In the dialog box, using the mouse pointer, choose which computer that you need to connect to. Once that your selection has been highlighted, choose one of the icons to the left of the list, depending which functions that you need to perform. The control icon is the most used icon. It allows the user to be able to do anything that they could do if they were actually at that terminal. Once the icon has been chosen, Timbuktu will ask for a password. The passwords are case sensitive. The proper password will allow you to continue. Any other variation will not.

Once the proper password has been entered and the "enter" key has been pressed, the remote computer's screen will appear on the local screen with a black boarder around it. At the top of this black boarder is the name of the remote computer. Above the black boarder is a menu. The screen within the black boarder might also have a menu. It is important not to confuse these two menus. The menu outside of the boarder is the menu of the local computer; in other words it is the Timbuktu menu of the computer that you are stationed in front of. The menu within the black boarder, if there is one, is the menu of the remote computer, or the one that you are attempting to control or observe.

Control Icon

The Control Icon is used when you wish to control the other computer directly. This allows you to operate that computer remotely as if you were standing there. You are able to type, use the mouse, change files, and change settings remotely.

Observe Icon

The Observe Icon is used when you wish to watch another computer remotely without being able to affect its operation. You will not be able to affect the computer by typing, moving your mouse, or any other method.

Send File Icon

The Send File Icon is used when you wish to send one or more files to one or more remote computers. You select the files you wish to send on the left hand side and select which computers to send to on the right hand side. This is a good use for sending the same files to multiple locations with out having to copy each file individually through chooser or some other method.

Exchange File Icon

The exchange Icon is like the Send file Icon in that you can send files to another computer but it allows you to retrieve files from the remote computer at the same time. You can only do this with one remote computer at a time but you do not need to send files there and then control that computer to send files to you.

Quitting Timbuktu or opening new connections

When all processing at the remote computer is finished, either quit Timbuktu, or close the present connection and open the next.

To quit Timbuktu, simply use the mouse pointer, go the 'File' menu, and choose 'Quit'.

To close the current connection and open the next, the following can be done...

- 1) Click the square in the left hand upper corner of the black boarder with the mouse pointer
- 2) Choose "New connection" from the file menu
- 3) Follow the procedures above for "USING TIMBUKTU"

Adding new users or changing passwords

A new password may be required for Timbuktu if the old one is compromised. To change the password...

- 1) Choose "Define Users..." from the Setup menu.
- 2) Highlight the user in the window which is not a guest. In a new center this user is called "Squanto". Click the button labeled "Delete User".
- 3) Click the button marked "New User".
- 4) Put in a new user name. Check the box located to the left of the new user name. This will allow for password access without having to be a registered user.
- 5) Click all the privilege boxes on the right of the new user name.
- 6) Click "Okay" on the dialog window.

Batch Files

The following section covers the batch files and related files for use with bootup settings and configurations. Also included is the batch files used for easy and fast install of software to the cockpits.

The files that will be discussed in the following section is as follows:

- Pod Operation
 - Autoexec.bat
 - Config.sys
 - Setenv.bat
- Install Files
 - Syspod.bat
 - Sysgen.bat

The batch files for pod operation will differ between pod and cameraship configurations. The Cameraship requires only one or two line changes in each of the files.

AUTOEXEC.BAT

In the Autoexec.bat File you will find a line as follows:

call setenv r s s p

This is for standard pod operation. It tells the pc to look for rio input, to run at slow clock speed, that there is sound, and to look for a plasma display. For the Cameraship the line should read as follows:

call setenv t f s g

This is for cameraship operation. It tells the pc to basically ignor rio input, to run at fast clock speed, that there is a sound card present, and to display gauges (For scores and etc.)

CONFIG.SYS

In the Config.sys File you will find lines at the bottom that pertain to setting up the AWE Sound Cards in the PC. Some Centers have only one sound card in the cameraship pc's. For the centers that have cameraship pc's with only one sound card the lines dealing with the rear sound card need to be removed. The lines that would be deleted are as the following:

device=c:\sb\drv\csp.sys /unit=1 /blaster=A:240

device=c:\sb\drv\ctsb16.sys /unit=1 /blaster=A:240 I:7 D:3 H:6

By removing these two lines the pc will not make settings for a card that is not there.

SETENV.BAT

In the Setenv.bat File for cameraship operation two lines have to be changed. There is a line for main video display output and one for sound card configuration. The line as follows for video needs to be changed as follows:

DPLARG=/tranny~.\vrendmon.btl~\i860~.\vrnostex.mng~/device~0x150~/video~**svga**~/pipes~1~/qual~0x14~/system_tex~0~

TO

DPLARG=/tranny~.\vrendmon.btl~\i860~.\vrnostex.mng~/device~0x150~/video~**ntsc**~/pipes~1~/qual~0x14~/system_tex~0~

If you have a cameraship with only one sound card the following line in bold has to be removed from the file.

```
:NOSOUND
set AWE_FRONT=
set AWE_REAR=
```

SYSPOD.BAT

The syspod.bat file is used by SSE or the Head Technician in order to facilitate a easier and quicker install of new software to the pods. The way this batch file works is it is called by the Sysgen.bat file and given parameters. These parameters determine what set, pod, batch file configuration, wattcp.cfg file to load, and dos version. An example of one of these call is as follows:

CALL SYSPOD CHICAGO ALPHA C NOVELL

- **CHICAGO** - Tells syspod to look at the chicago wattcp directory for proper wattcp.cfg file to load.
- **ALPHA** - Tells File to look to the Alpha Workgroup
- **C** - Tells File to look for the Cameraship. A number can be used such a 3 for pod 3.
- **NOVELL** - Tells File to load batch files for the Novell Dos Version.

Additionally when C is given as a pod assignment the syspod file will load the cameraship version of the autoexec.bat, config.sys, and setenv.bat files automatically.

The wattcp.cfg files are found in a directory with thats centers name on it and is labeled with a pod name. ex. Alpha_1.cfg. The syspod file changes the alpha_1.cfg name to wattcp.cfg when it is copied to that pod.

Important Note:

The syspod.bat File will load what ever version of software that is in the system4 directory with the name of rprel.zip. If you receive a new version you first put that version in the archive directory. (Ex. c:\system4\archive\rprel818.zip) You then copy that file to the system4 directory as rprel.zip. An example of this command is:

Copy c:\system4\archive\rprel818.zip c:\system4\rprel.zip

From that point on whenever syspod is used it would update using the rprel818.zip release of software.

SYSGEN.BAT

The sysgen.bat file is nothing more that a gloried menu system that calls the syspod.bat file and tells it through parameters what pods to load. An example of loading a entire set is that the sysgen.bat file calls the syspod.bat file repeatedly with different parameters for each pod.

ex.

```
Call Syspod chicago alpha 1 novell
Call Syspod chicago alpha 2 novell
Call Syspod chicago alpha 3 novell
AND SO ON...
```


If you know all of the parameters you could simply bypass the sysgen.bat file and tell the syspod file what you want it to do. An example of this is if I just want to load the gamma_3 pod at the Parramatta Center I would issue the following command from the prompt:

c:\> syspod para gamma 3 novell

It is however **highly** recommended that the sysgen.bat file be used instead of entering the parameters in on your own.

*******If you have any problems with either the sysgen or syspod batch files please bring it to SSE's attention immediately.*******

Examples of These Files are as Follows:

- Autoexec.bat
- Autoexec.bat - Cameraship Configuration
- Config.sys
- Config.sys - Cameraship with only one sound card Configuration
- Setenv.bat
- Setenv.bat - Cameraship Configuration
- Syspod.bat

Sysgen.bat File will not be given as an example due to its length in size and continous changes due to new centers coming online.

AUTOEXEC.BAT

```
@ECHO Off
PATH C:\NWCLIENT;C:\NWDOS;C:\;c:\nnd;.
VERIFY OFF
PROMPT $P$G
SET NWDOSCFG=C:\NWDOS
SET FBP_USER=Virtual World Entertainment
SET SOUND=C:\SB16
SET MIDI=SYNTH:1 MAP:E MODE:0
SET BLASTER=A220 I5 D1 H5 P330 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:130;0 /tr:50;0
SET BLASTER=A240 I7 D3 H6 P300 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:120;0 /tr:115;0
SET AWE_FRONT=A220 I5 D1 H5 P330 T6
SET AWE_REAR=A240 I7 D3 H6 P300 T6
rem nnd /q /r:c:\nnd\report.txt
cd \nwclient
lh lsl
lh DC21040
lh odipkt
cd \rp
date < cr >> crash.log
time < cr >> crash.log
echo *** Cockpit Restarted *** >> crash.log
call setenv r s s p
:go
netnub -f rpl4opt.exe > temp
if not ERRORLEVEL 1 goto go
date < cr >> crash.log
time < cr >> crash.log
type temp >> crash.log
goto go
```

AUTOEXEC.BAT - Cameraship Configuration (NOTE THE BOLD PRINT AREA)

```
@ECHO Off
PATH C:\NWCLIENT;C:\NWDOS;C:\;c:\nnd;.
VERIFY OFF
PROMPT $P$G
SET NWDOSCFG=C:\NWDOS
SET FBP_USER=Virtual World Entertainment
SET SOUND=C:\SB16
SET MIDI=SYNTH:1 MAP:E MODE:0
SET BLASTER=A220 I5 D1 H5 P330 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:130;0 /tr:50;0
SET BLASTER=A240 I7 D3 H6 P300 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:120;0 /tr:115;0
SET AWE_FRONT=A220 I5 D1 H5 P330 T6
SET AWE_REAR=A240 I7 D3 H6 P300 T6
rem nnd /q /r:c:\nnd\report.txt
cd \nwclient
lh lsl
lh DC21040
lh odipkt
cd \rp
date < cr >> crash.log
time < cr >> crash.log
echo *** Cockpit Restarted *** >> crash.log
call setenv t f s g
:go
netnub -f rpl4opt.exe > temp
if not ERRORLEVEL 1 goto go
date < cr >> crash.log
time < cr >> crash.log
type temp >> crash.log
goto go
```

CONFIG.SYS

```
DEVICE=C:\NWDOS\EMM386.EXE DPMI=OFF FRAME=NONE
device=c:\nwdos\dpms.exe
SHELL=C:\COMMAND.COM C:\ /E:750 /P
BREAK=ON
BUFFERS=15
FILES=40
LASTDRIVE=Z
HISTORY=ON,512,ON
COUNTRY=1,,C:\NWDOS\COUNTRY.SYS
DOS=HIGH,UMB
DEVICE=C:\SB16\DRV\CSP.SYS /UNIT=0 /BLASTER=A:220
DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5
DEVICE=C:\SB16\DRV\CSP.SYS /UNIT=1 /BLASTER=A:240
DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=1 /BLASTER=A:240 I:7 D:3 H:6
DEVICE=C:\SB16\DRV\CTMMSYS.SYS
```

CONFIG.SYS - Cameraship Configuration with only One Sound Card

```
DEVICE=C:\NWDOS\EMM386.EXE DPMI=OFF FRAME=NONE
device=c:\nwdos\dpms.exe
SHELL=C:\COMMAND.COM C:\ /E:750 /P
BREAK=ON
BUFFERS=15
FILES=40
LASTDRIVE=Z
HISTORY=ON,512,ON
COUNTRY=1,,C:\NWDOS\COUNTRY.SYS
DOS=HIGH,UMB
DEVICE=C:\SB16\DRV\CSP.SYS /UNIT=0 /BLASTER=A:220
DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5
DEVICE=C:\SB16\DRV\CTMMSYS.SYS
```

SETENV.BAT

```
rem -----
rem - setenv.bat performs actions that must occur in
rem - the shell prior to execution of rpl4*.exe
rem -----
rem - there are four arguments that must all be specified
rem - 1= t/r  where t=thrustmaster, r=rjo
rem - 2= s/f  where s=slow clock,  f=fast clock
rem - 3= s/n  where s=sound,      n=nosound
rem - 4= p/g/n where p=plasma and gauges, g=gauges, n=no gauges
rem -----
rem - setenv with no args is RIO, FAST, SOUND, PLASMA
rem -----

rem -----
rem controls
rem -----
if "%1"=="t" goto THRUSTMASTER
set L4CONTROLS=RIO,KEYBOARD
goto CONTROLSDONE

:THRUSTMASTER
set L4CONTROLS=THRUSTMASTER,KEYBOARD

:CONTROLSDONE
rem -----
rem timer
rem -----
if "%2"=="s" goto SLOWCLOCK
set L4TIMER=FAST
goto TIMERDONE

:SLOWCLOCK
set L4TIMER=

:TIMERDONE
rem -----
rem gauges/plasma
rem -----
if "%4"=="n" goto NOGAUGE
if "%4"=="g" goto NOPLASMA
set L4GAUGE=640x480x16
set L4PLASMA=com2
goto GAUGEDONE

:NOPLASMA
set L4GAUGE=640x480x16
set L4PLASMA=
goto GAUGEDONE

:NOGAUGE
set L4GAUGE=
set L4PLASMA=
```

```

:GAUGEDONE
rem -----
rem main video
rem -----
set L4DPLCFG=%A4DPLCFG%
if "%L4DPLCFG%"==" " set L4DPLCFG=MARSDAY.INI
set A4DPLCFG=
set
DPLARG=/tranny~.\vrendmon.btl~/i860~.\vrnostex.mng~/device~0x150~/video~svga~/
pipes~1~/qual~0x14~/system_tex~0~

rem -----
rem - AWE settings
rem -----
if "%3"=="n" goto NOSOUND
set AWE_FRONT=A220 I5 D1 H5 P330 T6
set AWE_REAR=A240 I7 D3 H6 P300 T6
copy /v audio\ctmix.cfg c:\sb16
set BLASTER=%AWE_FRONT%
c:\sb16\s16set /p /q
c:\sb16\s16set /ma:215;0 /mi:230;0 /ba:235;0 /tr:110;0
set BLASTER=%AWE_REAR%
c:\sb16\s16set /p /q
c:\sb16\s16set /ma:215;0 /mi:230;0 /ba:220;0 /tr:135;0
set BLASTER=%AWE_FRONT%
goto SOUNDDONE

:NOSOUND
set AWE_FRONT=
set AWE_REAR=

:SOUNDDONE

```

SETENV.BAT - Cameraship Configuration (NOTE THE BOLD AREA's)

```
rem -----
rem - setenv.bat performs actions that must occur in
rem - the shell prior to execution of rpl4*.exe
rem -----
rem - there are four arguments that must all be specified
rem - 1= t/r  where t=thrustmaster, r=rjo
rem - 2= s/f  where s=slow clock,  f=fast clock
rem - 3= s/n  where s=sound,      n=nosound
rem - 4= p/g/n where p=plasma and gauges, g=gauges, n=no gauges
rem -----
rem - setenv with no args is RIO, FAST, SOUND, PLASMA
rem -----

rem -----
rem controls
rem -----
if "%1"=="t" goto THRUSTMASTER
set L4CONTROLS=RIO,KEYBOARD
goto CONTROLSDONE

:THRUSTMASTER
set L4CONTROLS=THRUSTMASTER,KEYBOARD

:CONTROLSDONE
rem -----
rem timer
rem -----
if "%2"=="s" goto SLOWCLOCK
set L4TIMER=FAST
goto TIMERDONE

:SLOWCLOCK
set L4TIMER=

:TIMERDONE
rem -----
rem gauges/plasma
rem -----
if "%4"=="n" goto NOGAUGE
if "%4"=="g" goto NOPLASMA
set L4GAUGE=640x480x16
set L4PLASMA=com2
goto GAUGEDONE

:NOPLASMA
set L4GAUGE=640x480x16
set L4PLASMA=
goto GAUGEDONE

:NOGAUGE
set L4GAUGE=
set L4PLASMA=
```

```
:GAUGEDONE
rem -----
rem main video
rem -----
set L4DPLCFG=MARSDAY.INI
set
DPLARG=/tranny~.\vrendmon.btl~/i860~.\vrend.mng~/device~0x150~/video~ntsc~/pipe
s~1~/qual~0x14~/system_tex~0~

rem -----
rem - AWE settings
rem -----
if "%3"=="n" goto NOSOUND
set AWE_FRONT=A220 I5 D1 H5 P330 T6
copy /v audio\ctmix.cfg c:\sb16
set BLASTER=%AWE_FRONT%
c:\sb16\s16set /p /q
c:\sb16\s16set /ma:230;0 /mi:230;0 /ba:235;0 /tr:100;0
goto SOUNDDONE

:NOSOUND
set AWE_FRONT=
set AWE_REAR= (would be removed if one sound card is in cameraship)

:SOUNDDONE
```


SYSPOD.BAT

```
@echo off
rem -----
rem          SysPod Batch File
rem  Written by - Michel S. Lowrance
rem  Version   - 11/03/95
rem -----
rem Arguments are as follows
rem  - Center
rem      - chicago
rem      - montreal
rem      - indy
rem      - para
rem      - kyoto
rem  - Set
rem      - alpha
rem      - beta
rem      - gamma
rem  - Pod #
rem      - 1-8
rem      - c
rem  - Dos Type
rem      - novell
rem      - msdos
rem -----
echo Updating Site-%1 Pod-%2_%3 running under %4
net login %2/supervisor
net map d: %2_%3
deltree /y d:\rp
pkunzip -d -o c:\system4\rprel.zip d:\rp
copy c:\system4\%4\autoexec.bat d:\
copy c:\system4\%4\config.sys d:\
copy c:\system4\cr d:\rp
rem -----
rem if cameraship is indicated the cam setenv
rem file, autoexec file, and config file are copied
rem -----
if "%3"=="c" copy c:\system4\%4\setenv.cam d:\rp\setenv.bat
if "%3"=="c" copy c:\system4\%4\autoexec.cam d:\autoexec.bat
if "%3"=="c" copy c:\system4\%4\config.cam d:\config.sys
rem -----
rem copies proper wattcp.cfg for the selected pod
rem -----
copy c:\system4\wattcp\%1\%2_%3.cfg d:\rp\wattcp.cfg
type d:\rp\wattcp.cfg
```

(Batch Files Section Revised and Expanded June 11, 1996)

Batch Files

and how they work!!

The batch files are the system that sets up and configures the software that is run from the PC within the cockpit. Without these batch files you would literally have to manually startup and set the configurations for the software everytime you ran a mission for every single cockpit. These batch files are designed to make it easier for you to not only to run the cockpits in a hands off approach but to make it easier to set up the PC in the configuration that you want in relation to: Run RP or BT? Is it a Mission Review, Camera ship, or a Pod PC?

The Sections we will be looking at are the following:

CONFIG.SYS

AUTOEXEC.BAT

BOOTPOD.BAT

REL###.BAT

WATTCP.CFG

MAKEDISK.BAT

How these disk do what they do?

NOTE: In the following pages the batch files examples have words that are in **BOLD** and are **UNDERLINED**. They are not part of the batch file itself but are comments.

CONFIG.SYS

This is the first file that DOS will look at for configurations. The CONFIG.SYS files sets up the memory management as well as the device drivers for the two sound cards used by the PC.

```
rem *****
rem * Standard config.sys for field pods, this should not be edited without
rem * approval from SSE
rem *****
rem
rem *** setup memory management stuff
rem
DEVICE=C:\NWDOS\EMM386.EXE DPMI=OFF FRAME=NONE
rem
rem *** setup dos environment
rem
SHELL=C:\COMMAND.COM C:\ /E:1024 /P
BREAK=ON
BUFFERS=15
FILES=40
LASTDRIVE=Z
HISTORY=ON,512,ON
COUNTRY=1,,C:\NWDOS\COUNTRY.SYS
DOS=HIGH,UMB
rem
rem *** setup drivers for sound card
rem
THIS SETS UP THE FRONT AWE32 SOUND CARD
DEVICE=C:\SB16\DRV\CSP.SYS /UNIT=0 /BLASTER=A:220
DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5
THIS SETS UP THE REAR AWE32 SOUND CARD
DEVICE=C:\SB16\DRV\CSP.SYS /UNIT=1 /BLASTER=A:240
DEVICE=C:\SB16\DRV\CTSB16.SYS /UNIT=1 /BLASTER=A:240 I:7 D:3 H:6
DEVICE=C:\SB16\DRV\CTMMSYS.SYS
```

AUTOEXEC.BAT

The following is a example of the AUTOEXEC.BAT file that is loaded by DOS after the CONFIG.SYS file. This batch file sets up the environment settings for DOS as well as how the sound cards are configured and dealt with by DOS. This file also initializes the networking functions of the PC. After all of this the batch file then calls on the next file which would be the BOOTPOD.BAT file.

```
@ECHO Off
rem *****
rem * Standard autoexec.bat for field pods, this should not be edited without
rem * approval from SSE
rem *****
PATH C:\NWCLIENT;C:\NWDOS;c:\nndd;c:\vgl_labs
VERIFY OFF
PROMPT $P$G
SET NWDOSCFG=C:\NWDOS
SET FBP_USER=Virtual World Entertainment
rem
rem *** setup the sound cards
rem
THIS TELLS DOS WHERE TO FIND SOUND FILES
SET SOUND=C:\SB16
SET MIDI=SYNTH:1 MAP:E MODE:0
THIS SETS UP THE FRONT AWE32 SOUND CARD
SET BLASTER=A220 I5 D1 H5 P330 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:130;0 /tr:50;0
THIS SETS UP THE REAR AWE32 SOUND CARD
SET BLASTER=A240 I7 D3 H6 P300 T6
C:\SB16\DIAGNOSE /S
C:\SB16\AWEUTIL /S
C:\SB16\SB16SET /P /Q
c:\sb16\sb16set /ba:120;0 /tr:115;0
SET AWE_FRONT=A220 I5 D1 H5 P330 T6
SET AWE_REAR=A240 I7 D3 H6 P300 T6
rem
rem *** load the network stuff
rem
THIS INITIALIZES THE NETWORK DRIVERS
lh c:\nwclient\lsl
lh c:\nwclient\DC21040
lh c:\nwclient\odipkt
NWCACHE 1024 1024 /LEND=OFF /DELAY=1000
```

Cont. next page

THIS RENAMES THE LAST.SPL FILE TO SAVE FOR FUTURE USE

copy c:\rel6_3\rp\last.spl c:\rel6_3\rp\bad.spl

copy c:\rel6_3\bt\last.spl c:\rel6_3\bt\bad.spl

THIS DELETES THE LAST.SPL SO NOT TO INTERFERE WITH NEW MISSIONS

del c:\rel6_3\rp\last.spl

del c:\rel6_3\bt\last.spl

THIS LOADS UP THE NEXT BATCH FILE TO RUN

c:\vgl_labs\thispod\bootpod.bat

BOOTPOD.BAT

This file does two things. It calls on the REL###.BAT file at the beginning but after running that batch file it sets up the configuration for the software. This file also sets up the PC as a Pod, Mission Review, or Camera ship.

GOES AND EXECUTES BATCH FILE THEN RETURNS TO COMPLETE REST OF THIS BATCH FILE

CALL REL###.BAT

FOR BT MISSION REVIEW ONLY

SET PRELOAD=no

em *** This is the standard bootpod.bat file for a field svga mission review

rem *** CASE IS SIGNIFICANT, MAKE SURE THERE ARE NO TRAILING BLANKS ***

FOR POD CONFIGURATION

SET L4CONTROLS=RIO, KEYBOARD

FOR CAMERA SHIP OR MISSION REVIEW

SET L4CONTROLS=THRUSTMASTER,KEYBOARD

SET L4TIMER=

rem *** Sound can be ON or OFF ***

SET L4SOUND=ON

rem *** Gauge can be 640x480x8 or 16 ***

FOR POD CONFIGURATION

SET L4GAUGE=640x480x16

FOR MISSION REVIEW OR CAMERA SHIP CONFIGURATION

SET L4GAUGE=640x480x8

rem *** Plasma can be com2 or nothing ***

SET L4PLASMA=

rem *** Intercom can be ON or nothing

SET L4INTERCOM=

rem *** Review can be 1 or nothing

FOR POD OR CAMERA SHIP CONFIGURATION

SET REVIEW=

FOR MISSION REVIEW CONFIGURATION

SET REVIEW=1

rem *** VIDEOFORMAT can be svga or ntsc

FOR MISSION REVIEW OR CAMERA SHIP CONFIGURATION

SET VIDEOFORMAT=ntsc

FOR POD CONFIGURATION

SET VIDEOFORMAT=svga

rem *** HEAPSIZE

FOR POD and CAMERA SHIP CONFIGURATION

SET HEAPSIZE=10000000

FOR MISSION REVIEW CONFIGURATION

SET HEAPSIZE=19200000

rem *** auto-start the game

GOES TO BATCH FILE THAT STARTS SOFTWARE

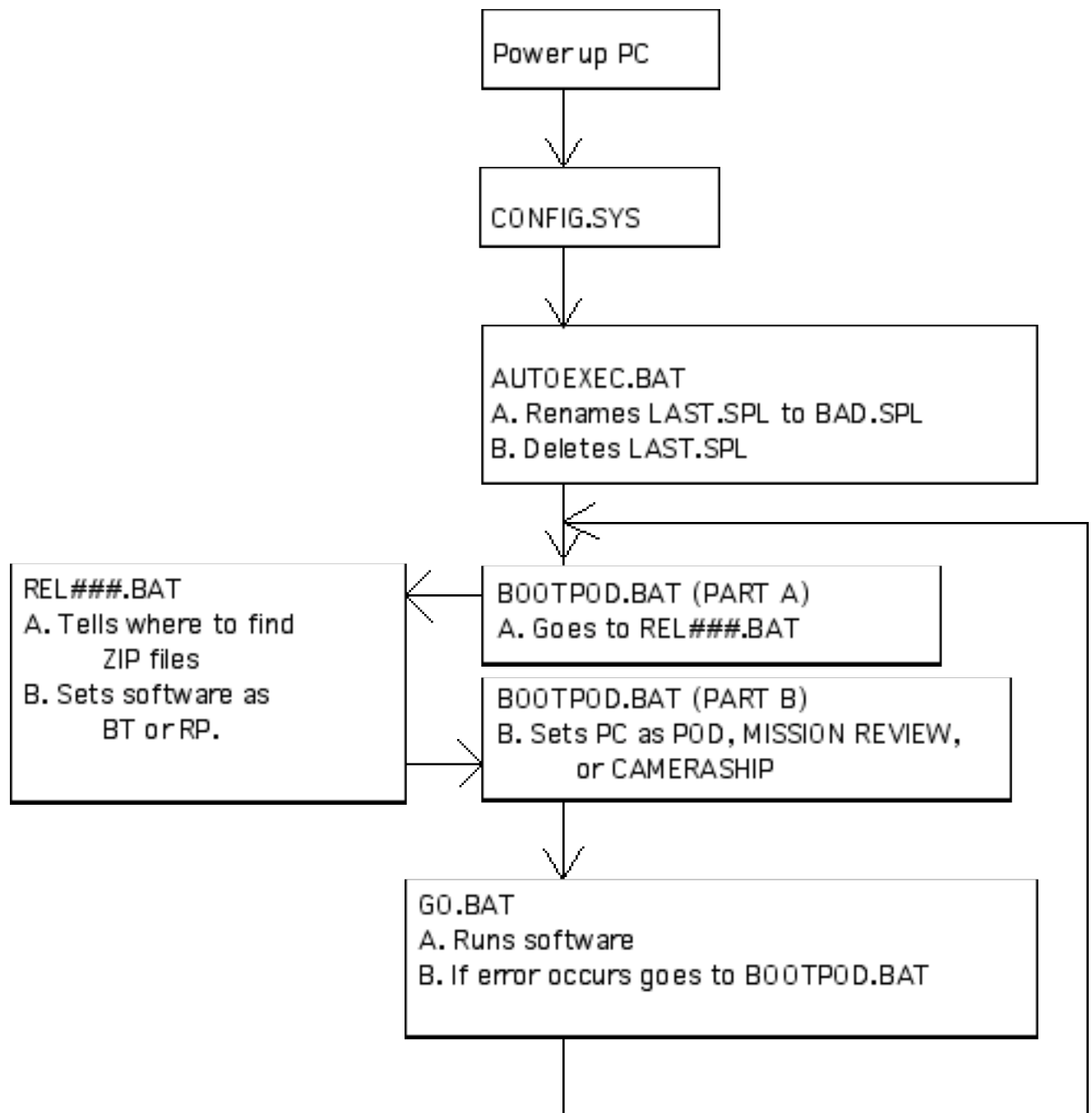
go

REL###.BAT

This file does several important things. The most important of which includes: Which software to run (BT or RP) and where to find the archived zip files to update from.

```
@echo off
rem *****
rem * This is the (per user) setup script that sets up your
rem * accounts and personal directories used to update the
rem * pods from a master server
rem * Currently the scripts are setup to support only one
rem * server but this could change in the future
rem *****
rem * If the first argument is -u, your directory will be updated
rem * If your personal directory does not exist it will be created
rem *****
set A1=
if not "%1"==" " set A1=%1
rem *** The type of network client to use during the update. Use NT for
rem *** an NT or workgroup for windows client, PNW for Personal Network.
rem *** "Real" network 4.0 support does not exist but could be added
SETS NETWORK FOR PERSONAL NETWORK
set NETCLIENT=PNW
rem *** The name of the network resource to be mounted, mapped...etc.
TELLS WHAT PC TO LOOK FOR ON THE NETWORK
set NETRESOURCE=tech
rem *** The id used to login to the server (you may use utility in house)
rem *** For Personal Network, include the workgroup name ie: development/milo
TELLS WHAT TO LOG INTO THE NETWORK AS WORK GROUP AND PASSWORD
set NDSID=tech\supervisor
rem *** This is the directory on the server where your ZIP files are
TELLS WHICH DIRECTORY TO FIND ARCHIVED ZIP FILES
set NDSDIR=\system4\archive
rem *** This is the directory on the pod your stuff will be installed in
TELLS WHICH DIRECTORY TO INSTALL TO
set HOMEDIR=REL6_3
rem *** This is the drive letter that HOMEDIR is on
TELLS WHICH DRIVE TO INSTALL TO
set HOMEDRIV=C:
rem *** PREFGAME is the game to be run if you don't tell it otherwise
TELLS WHICH SOFTWARE TO RUN
set PREFGAME=BT
rem *** PREFMODE is the mode to run the game in (ERROREXIT or ERRORLOG)
set PREFMODE=ERRORLOG
rem *** PREFOPT is the preferred optimization level to run (OPT, D3S...etc)
set PREFOPT=OPT
rem *** PREFSWITCH is the preferred switches to feed to netnub (for debug)
set PREFSWITCH=
rem *** announce preferred modes and games
echo Game is %PREFGAME%, debug level is %PREFOPT%, mode is
%PREFMODE%
rem *** this script handles updating and directory switching
call labs1.BAT
```

FROM HERE IT GOES BACK TO THE BOOTPOD.BAT FILE



WATTCP.CFG

This file is used by the software to determine what the address of the PC is. This address is what makes the Pod respond to the Console at the address specified in the CONSOLE.INI File. If a message is sent to 20#.0.0.111 (alpha_1) and the PC thinks its address is 20#.0.0.112 (alpha_2) then it will not respond to that message.

This file resides in three places. The VGL_LABS\THISPOD directory and the REL###\BT and REL###\RP directories. Whenever software is updated the BT and RP directories are updated with the WATTCP.CFG that is stored in the VGL_LABS\THISPOD directory.

THIS LINE DETERMINES THE ADDRESS OF THE PC.

Refer to CONSOLE.INI Section for Address Specifics.

my_ip = 202.0.0.126
netmask = 255.255.255.0
nameserver = 200.0.0.1
gateway = 200.0.0.1

MAKEDISK.BAT

This file is nothing more than a glorified batch file that runs like a menu system. This menu system is used to select which type of install disk that is created. These disks are used for several different functions.

1. Pod_Install
 This disk is used to load any new software or reload current software from the tech PC to the pod PC. It also configures the PC to start up in Pod Mode and default software is to run BT.
2. Review_Install
 This disk is used to load any new software or reload current software from the tech PC to the Review PC. It also configures the PC to start up in Mission Review Mode and default software is to run BT.
3. BT_Load
 This disk is used to switch the PC to run BT software and sets it for Pod Mode.
4. RP_Load
 This disk is used to switch the PC to run RP software and sets it for Pod Mode.
5. BT_Review_Load
 This disk is used to switch the PC to run BT software and sets it for Review Mode.
6. RP_Review_Load
 This disk is used to switch the PC to run RP Software and sets it for Review Mode.
7. BT_Camera_Load
 This disk is used to switch the PC to run BT software and sets it for camera ship Mode.
8. RP_Camera_Load
 This disk is used to switch the PC to run RP Software and sets it for camera ship Mode..

How these disk do what they do?

Well lets take a look.

1. Pod_Install
 - a. First it tries to create a VGL_LABS directory then a THISPOD directory within that. If those two directories already exists then it just skips and keeps going with the rest of the install.
 - b. It then copies the files necessary to run the software to the VGL_LABS directory.
 - c. It copies the current version of AUTOEXEC.BAT, CONFIG.SYS, BOOTPOD.BAT to the THISPOD directory. If this is the first time that the PC has every been setup you will have to add or make the WATTCP.CFG file yourself. Using the example in the **WATTCP.CFG Section** you can make the file if you cannot find a copy.
 - d. It then tries to delete the release directory that you are trying to install. This is done to clear out the release version if it is already in place so that a clean copy can be placed.
 - e. It then requests that you reboot the PC. This will do several things. Upon boot it will run the REL###.BAT file and will find that there is no current directory for the software. It will then go and try to find the zip files which should be on the TECH PC in order to install the BT and RP Software. It will then also copy the WATTCP.CFG file from the VGL_LABS\THISPOD directory and place a copy of it to the BT and RP directories. It will at this point then try and start up as normal.
2. Review_Install

This disk does the same thing as the Pod_Install Disk except it sets up the software to run in Mission Review Mode.
3. BT_Load and RP_Load

These disks have a AUTOEXEC.BAT file that does nothing more that copy two files. One file is the REL###.BAT file to the VGL_LABS directory. It is this file that determines which software the PC is going to run, BT or RP. The other file is the BOOTPOD.1 file. This file is copied to the THISPOD directory and renamed to BOOTPOD.BAT. This file determines what type of mode the PC will come up in, Pod, Mission Review, or Camera ship. In this case in Pod Mode.

4. BT_Review_Load and RP_Review_Load
These disks have a AUTOEXEC.BAT file that does nothing more than copy two files. One file is the REL###.BAT file to the VGL_LABS directory. It is this file that determines which software the PC is going to run, BT or RP. The other file is the BOOTPOD.2 file. This file is copied to the THISPOD directory and renamed to BOOTPOD.BAT. This file determines what type of mode the PC will come up in, Pod, Mission Review, or Camera ship. In this case in Mission Review Mode.
5. BT_Camera_Load and RP_Camera_Load
These disks have a AUTOEXEC.BAT file that does nothing more than copy two files. One file is the REL###.BAT file to the VGL_LABS directory. It is this file that determines which software the PC is going to run, BT or RP. The other file is the BOOTPOD.3 file. This file is copied to the THISPOD directory and renamed to BOOTPOD.BAT. This file determines what type of mode the PC will come up in, Pod, Mission Review, or Camera ship. In this case in Camera ship Mode.

*******WARNING*****WARNING*****WARNING*****WARNING Any time you change a PC from one type of Mode to another (ex. POD to Mission Review) you have to change the HOSTTYPE line for that pod in the CONSOLE.INI file.
*****WARNING*****WARNING*****WARNING*****WARNING**

(Console.INI Section Revised June 4, 1996)

CONSOLE.INI File

The CONSOLE.INI file is like the Network Configuration file for system 2.0-3.0. This tells the Console what the addresses and configuration of the Set is. There are only a few things that need to be aware of when dealing with this file. Those things being:

1. Network Endpoint List
2. Cockpit IP Address
3. hostType

NETWORK ENDPOINT LIST

The Network Endpoint List is located at the very beginning of the Console.ini File. This lets the Console Application know exactly how many Cockpits and Mission Review/Cameraships are in the set. There should be a ENDPOINT for every cockpit and mission review/cameraship. An example being if you have a 8 cockpit set with one mission review/cameraship then there should be a total of 9 lines in the Network Endpoint List. An Example of what one of these lines looks like is as follows:

```
networkEndpoint=NetworkEndpoint::Cockpit::Bogon Alert!  
(Bogon Alert! being the name of the endpoint or cockpit)
```

There is also a corresponding Variable list for each Network Endpoint. This is the information that is used by the Console Application. Without this Variable list the cockpit does not exist for the Console Application. There is a Variable list for every NetworkEndpoint in the NetworkEndpointList. If there are only 5 cockpits and 1 mission review/cameraship then there should only be 6 lines in the NetworkEndpointList and 6 Variable Lists. If the number of Variable list don't match the number of NetworkEndpoints then the Console Application will not operate correctly. An Example of what a Variable list looks like is as follows:

[NetworkEndpoint::Cockpit::Bogon Alert!]

classID=Ptcp

hostType=1

state=0

resourceID=130

resourceIndex=1

pictID=300

addressIP=200.0.0.201

etc.....

NOTE: The NetworkEndpoint must match the Variable list name (Bogon Alert!). The Variable list must also follow in the order of the NetworkEndpointList. If Bogon Alert! is the first name on the NetworkEndpointList then it also must be the First Variable List.

COCKPIT IP ADDRESS

In the Variable list is a line that looks like this: **addressIP=XXX.0.0.XXX**. This is the address of the cockpit or mission reivew/cameraship. The format of the address is setup for specific centers and for specific sets. For our Example we will use **203.0.0.112**.

the 203 represents the specific center or Virtual World Store.

- 201 - Chicago
- 202 - Montreal
- 203 - Indianapolis
- 204 - Parramatta
- 205 - Kyoto
- 206 - San Diego
- 207 - Korea Office

The last three digits represent the specific set and cockpit.

112 is used as a generic number.

This number can be not be higher than 254. This is a good way to make sure that this does not become a problem at a later date.

112 is used to represent the set. 1 = alpha, 2 = beta, 3 = gamma, etc...

112 is used to represent a specific PC

(Cockpit, Mission Review, or Camera Ship).

Examples

204.0.0.112 = Parramatta Site Alpha_2

202.0.0.122 = Montreal Site Beta_2

203.0.0.139 = Indianapolis Site Gamma_C

(Mission Review or Camera Ship)

HOSTTYPE

In the Variable list is a line designated as **hostType=**. This is to indicate what type of configuration this is for.

Type 0 is for cockpit.

Type 1 is for Camera Ship.

Type 2 is for Mission Review.

NetworkEndpointlist and Variable list Example

Below is an example of a 1 cockpit set up with a Mission Review and a cameraship. There are only three lines in the NetworkEndpointList and only three Variable lists. Please note the type and the addressIP.

```
[NetworkEndpointList]
networkEndpoint=NetworkEndpoint::Cockpit::Bogon Alert!
networkEndpoint=NetworkEndpoint::Cockpit::Review
networkEndpoint=NetworkEndpoint::Cockpit::Camera
```

```
[NetworkEndpoint::Cockpit::Bogon Alert!]
classID=Ptcp
hostType=0
state=0
resourceID=130
resourceIndex=1
pictID=300
addressIP=201.0.0.111
addressUse=0
openTimeout=32767
listenTimeout=0
delay=1
throughput=1
reliability=1
precedence=0
fragment=0
timeToLive=60
security=0
queryTimeout=600
loadQueryInterval = 1
inProgressQueryInterval = 10
defaultPort=1501
localhostPort=1501
openInterval=10
```

[NetworkEndpoint::Cockpit::Review]

classID=Ptcp
hostType=2
state=0
resourceID=130
resourceIndex=41
pictID=324
addressIP=201.0.0.112
addressUse=0
openTimeout=32767
listenTimeout=0
delay=1
throughput=1
reliability=1
precedence=0
fragment=0
timeToLive=60
security=0
queryTimeout=600
loadQueryInterval = 1
inProgressQueryInterval = 10
defaultPort=1501
localhostPort=1501
openInterval=10

[NetworkEndpoint::Cockpit::Camera]

classID=Ptcp
hostType=1
state=0
resourceID=130
resourceIndex=41
pictID=324
addressIP=201.0.0.113
addressUse=0
openTimeout=32767
listenTimeout=0
delay=1
throughput=1
reliability=1
precedence=0
fragment=0
timeToLive=60
security=0
queryTimeout=600
loadQueryInterval=1
inProgressQueryInterval=10
defaultPort=1501
localhostPort=1501
openInterval=10

FTP Procedure for Release 6_3, June 4, 1996.

FTP PROCEDURE

If there are any problems during or you have questions about the install of the software Do Not Hesitate to call SSE at (312)243-6515. We will be glad to walk you through it on the phone.

1. Retrieve software from DAT to Mac (Preferably to your Tech Mac Computer) using Retrospect. Refer to the **Retrospect Section** of your Tech Manual.
2. On your Mac Tech Computer be sure that the PC Exchange Control Panel is in use.
 - A. There should be a Control Panel folder located in the Mac Tech Computer System Folder. Make sure that the PC Exchange control panel is in the control panel folder upon startup of the Mac Tech Computer.
3. Copy the TEL2308B.ZIP and ODIPKT.COM file to a DOS Format Floppy Disk. On the PC Tech Computer create a directory named NCSA and copy the files from the Floppy Disk to that Directory.
 1. Insert Dos Disk into the Mac Floppy Drive.
 2. Move the TEL2308B.ZIP, ODIPKT.COM files to the Floppy Disk Icon.
 3. Using the Special Menu, EJECT the disk.
 4. Insert disk in Floppy Drive of the Tech PC Computer.
 5. From the dos prompt create NCSA directory
Command: MD C:\NCSA
 6. Copy the files from the Floppy Disk to the New directory.
Command: COPY A:*.* C:\NCSA
4. On Your Mac Tech Computer set up the MACTCP Control Panel.
 - A. Select Ethernet.
 - B. Select More.
 - C. Set to Manual.
 - D. Select OK.
 - E. Set MACTCP Address for Tech Mac Computer to: ###.0.0.100
(### = Site ID, Kyoto=205, San Diego=206)
 - F. Restart the Tech Mac Computer.
5. On the Mac Tech Computer Startup the NCSA Telnet Application
 - A. Under EDIT select preferences, Set to FTP Server.
 - B. Server Mode should be set to ON, No Password Needed.
 - C. The Box for USE MACBINARY II should be Marked.
 - D. Select OK

6. On the Mac make sure the software that is to be transferred to the PC (zip files) is in the root directory or disk drive folder and not on the Desktop. If the files to be transferred are on the desktop just drop them into the Hard drive folder.

7. On the PC Tech Computer.

A. Go to the NCSA Directory.
Command: `CD C:\NCSA`

B. Unpack the NCSA software.
Command: `PKUNZIP TEL2308B.ZIP`

C. Type `EDIT CONFIG.TEL`

D. Change the Following Line
`myip=#####`
to
`myip=###.0.0.101`
(### = Site ID)

E. Save the File (**ALT-F** then **S** or Select **Save**)

F. Exit the program (**ALT-F** then **X** or Select **EXit**).

8. At the Prompt (`C:\NCSA>`) Type `ODIPKT` and hit **ENTER**

9. At the Prompt (`C:\NCSA>`) Type `FTP ###.0.0.100` and hit **ENTER**
(### = Site ID)

10. At the Prompt (Username:) Hit **Enter** or **Return**

11. At the Prompt (`FTP>`) Type `BINARY` and hit **ENTER**

12. At the Prompt (`FTP>`) Type `HASH` and hit **ENTER**

13. At the Prompt (`FTP>`) Type `LS` and hit **ENTER**
This should list all available files under the disk drive of the Tech Mac Computer. You should be able to see the zip files that were restored from the DAT.

14. At the Prompt (`FTP>`) Type `GET RP6_3.ZIP` and hit **ENTER**
The program should begin transferring the zip file from your Mac to your PC Tech Computer.

- A. At the Prompt (`FTP>`) Type `GET BT6_3.ZIP` and hit **ENTER**
- B. At the Prompt (`FTP>`) Type `GET SCRIPT63.ZIP` and hit **ENTER**
- C. You may now Quit out of FTP.
At the Prompt (`FTP>`) Type `QUIT` and hit **ENTER**

15. You should place the `RP6_3.ZIP`, `BT6_3.ZIP`, and `SCRIPT63.ZIP` file in the `C:\SYSTEM4\ARCHIVE` directory.

Command: `COPY C:\NCSA\RP6_3.ZIP C:\SYSTEM4\ARCHIVE\RP6_3.ZIP`

Command: `COPY C:\NCSA\BT6_3.ZIP C:\SYSTEM4\ARCHIVE\BT6_3.ZIP`

Command: `COPY C:\NCSA\SCRIPT63.ZIP C:\SYSTEM4\ARCHIVE\SCRIPT6_3.ZIP`

16. Do the standard procedure for updating the software to the cockpits.
Follow the **Software Install Procedure**

-Michel S. Lowrance
Firestorm
Site Service Engineering

(Software Install Procedure, Release 6_3, June 10, 1996)
SOFTWARE INSTALL PROCEDURE

If there are any problems during or you have questions about the install of the software Do Not Hesitate to call SSE at (312)243-6515. We will be glad to walk you through it on the phone.

You will be requested on a determined date to be sure that the Tech PC is loaded up on the Network and that the Pipeline 50 be hooked up and available.

- A. Reboot the PC Tech Computer.
- B. When it asks if you wish to load the network software select **Yes**.
If it does not ask but goes straight to a C: prompt type in the following:
Command: STARTNET
This will load up the network software.
- C. Be sure the Pipeline 50 is hooked up the Ethernet Hub or Lan Switcher via a Ethernet Cable.
- D. When both the **PWR** and **WAN** lights are solid green (Not blinking) on the Pipeline 50 itself then it is setup and ready for use.

NOTE: If you do not have a Pipeline 50 then a DAT will be sent to you. You will have to follow the **FTP Procedure** that will be provided to get you to the beginning point of this procedure.

First we will need to rename your current software so that If the New Software is corrupted you will be able to recover and continue with no interruptions.

1. After the Software has been downloaded by the VGL LABS through the Pipeline 50 you will find the following files in the system4\archive directory of your Tech PC:

BT.ZIP
BT6_3.ZIP
RP.ZIP
RP6_3.ZIP
SCRIPT.ZIP
SCRIPT63.ZIP

- A. Rename the following files as described below:

Command: CD C:\SYSTEM4\ARCHIVE
Command: REN RP.ZIP RP3_7.ZIP
Command: REN BT.ZIP BT3_7.ZIP
Command: REN SCRIPT.ZIP SCRIPT37.ZIP

- B. You will now have to rename the New files so that they can be used for install. This will make REL6_3 your "Current" install files. Command:

CD C:\SYSTEM4\ARCHIVE
Command: REN RP6_3.ZIP RP.ZIP
Command: REN BT6_3.ZIP BT.ZIP

In order to reload REL3_7 it would be nessary to change the file names back so that REL3_7 is again your "Current release"

2. You need clear the current VGL_LABS Directory of the script files so that the new script files can be installed. However we need to make sure that the files are not Totally Deleted so that you can switch back to REL3_7 if there is a problem. Do the following:

```
Command: CD C:\
Command: MD SCRIPT37
Command: XCOPY C:\VGL_LABS\*. * C:\SCRIPT37 /S
Command: CD C:\VGL_LABS
Command: DEL *.* (WARNING - be sure you are in the VGL_Labs directory
when you enter this command)
```

This is nessary if you have the original script in your C:\SYSTEM4\ARCHIVE not only for backup put to also clean out the directory for new files.

3. Copy the SCRIPT63.ZIP file to the VGL_LABS directory.

```
Command: COPY C:\SYSTEM4\ARCHIVE\SCRIPT63.ZIP C:\VGL_LABS\SCRIPT63.ZIP
```

4. Go to the VGL_LABS directory and unzip the script file.

```
Command: CD C:\VGL_LABS
```

```
Command: PKUNZIP SCRIPT63.ZIP
```

If it asks if you wish to overwrite select Y for Yes or A for All.

5. Format eight 3.5" Disks with system files using a Novel DOS Machine.

```
Command: FORMAT A: /S
```

6. Label the Disks as follows:

- a. Pod Install Rel 6_3
- b. Review Install Rel 6_3
- c. Load BT Pod Rel 6_3
- d. Load RP Pod Rel 6_3
- e. Load BT Review Rel 6_3
- f. Load RP Review Rel 6_3
- g. Load BT Camera Rel 6_3
- h. Load RP Camera Rel 6_3

7. Run MAKEDISK.BAT from the VGL_LABS directory.

```
Command: CD C:\VGL_LABS
```

```
Command: MAKEDISK.BAT
```

A. It will ask you to insert a system formatted disk.

Insert the "Pod Install Rel6_3" disk then Hit **C** to Continue.

B. It will give you one choice of Releases to load. Select **1** for REL6_3.

C. It will give you eight choices..

Hit **1** for Pod Install.

D. Remove the Disk when it comes back to the menu screen.

E. Insert the "Review Install Rel6_3" Disk

F. Select **2** for Review Install.

G. Remove the Disk when it comes back to the menu screen.

- H. Insert the "Load BT Pod Rel6_3" Disk
- I. Select **3** for Load BT.
- J. Remove the Disk when it comes back to the menu screen.
- K. Insert the "Load RP Pod Rel6_3" Disk
- L. Select **4** for Load RP.
- M. Remove the Disk when it comes back to the menu screen.
- N. Insert the "Load BT Review Rel6_3" Disk
- O. Select **5** for Load BT Review.
- P. Remove the Disk when it comes back to the menu screen.
- Q. Insert the "Load RP Review Rel6_3" Disk
- R. Select **6** for Load RP Review.
- S. Remove the Disk when it comes back to the menu screen.
- T. Insert the "Load BT Camera Rel6_3" Disk
- U. Select **7** for Load BT Camera.
- V. Remove the Disk when it comes back to the menu screen.
- W. Insert the "Load RP Camera Rel6_3" Disk
- X. Select **8** for Load RP Camera.
- Y. Remove the Disk when it comes back to the menu screen.
- Z. Select **X** for Exit.

8. You can now update the pods and mission review using the Pod Install Disk or Review Install disk in the following manner:

- A. Be sure you have the Tech Pc loaded up on the network.
Refer to the first section of this Procedure.
- B. Go to the first pod in the set.
Insert the "Pod Install Rel 6_3" Disk into the A: Drive and Reboot the PC.
- C. When back at the DOS Prompt (C:\) remove the disk and reboot the PC again.
The PC should reboot and start downloading both the RP.ZIP and BT.ZIP files from the Tech PC.

- D. Continue this process with all the pods.
- E. Use the "Review Install Rel6_3" Disk for the Mission Reviews.

This will complete the software load of the PC's.

- 9. The following disks will be used to select which software will be running on each set:
 - Load BT Rel 6_3
 - Load RP Rel 6_3
 - Load BT Review Rel 6_3
 - Load RP Review Rel 6_3
 - Load BT Camera Rel 6_3
 - Load RP Camera Rel 6_3

Use the appropriate disk in order to load the correct software.

For example in order to get your set to run BT do the Following:

Place the "Load BT Pod Rel6_3" in the disk drive of the cockpit pc.

Reboot.

When back at prompt remove disk and reboot again.

Go to the next Pod and do the same till all pods of the set are reloaded.

Same for the mission review just using the "Load BT Review Rel 6_3"

Disk instead.

In order to switch to RP you will follow the same steps above but using the appropriate RP disks instead.

- 10. Copy the New Console Folder to each of the Sets Consoles.
Edit the CONSOLE.INI file in the Console Folder to match the Cockpit Addresses.

CONSOLE.INI Modification

Included with this release is a file labeled 'Stationery-Console.ini'. This file is the template which all the CONSOLE.INI's are based on. To modify the file to be used for your side the following procedure is done:

- 1. Make a two copies of the Stationery-Console.ini file. You will be using a copy to make sure you have a clean copy in case you make a mistake. Rename the Copies as Follows:

Review-Console.ini

Camera-Console.ini

- 2. Identify the nose art on the cockpits of the side being upgraded. Delete the lines on the Network Endpoint List which are not your cockpits. Note that there are separate Network Endpoints for mission review and camera ships. When modifying the Review-Console.ini file use the Mission Review Network Endpoints. When modifying the Camera-Console.ini file use the Camera ship Network Endpoints.

- 3. Beneath the Network Endpoint list are the Network Endpoint paragraphs. Delete the Network Endpoint paragraphs of the cockpits which you do not have on the side. Make sure that the entire paragraph is deleted. A complete paragraph is shown on the next page:

[NetworkEndpoint::Cockpit::Age of Discovery]

classID=Ptcp

hostType=0

state=0

resourceID=130

resourceIndex=6

pictID=300

addressIP=xxx.x.x.xxx

addressUse=0

openTimeout=32767

listenTimeout=0

delay=1

throughput=1

reliability=1

precedence=0

fragment=0

timeToLive=60

security=0

queryTimeout=600

loadQueryInterval=1

inProgressQueryInterval=10

defaultPort=1501

localhostPort=1501

openInterval=10

4. In the remaining Network Endpoint paragraphs, insert the correct IP number of the cockpit for your site in the AddressIP line.

5. Several fonts were packed with this software release. Place a copy of all those fonts in the fonts folder of system folder on all your operator's consoles.

6. In order to use the Console you will need to rename the Console.ini file that you will be using.

A. If you are running a set with Mission Reviews you will need to rename the Review-Console.ini file to CONSOLE.INI.

B. If you are running a set with Camera ships you will need to rename the Camera-Console.ini file to CONSOLE.INI

*****WARNING*****

If you decide to switch from Mission Review to Camera ship or Vice Versa remember to rename the Console.ini file back to what it was before renaming the new CONSOLE.INI

example:

Switched Set from Mission Review to Camera ships.

A. Rename CONSOLE.INI to Review-Console.ini

B. Rename Camera-Console.ini to CONSOLE.INI

*****WARNING*****

The software installation is now complete.

Enjoy Red Planet and BattleTech.

FTP Procedures Release 7_26, July 31, 1996.

FTP PROCEDURE

If there are any problems during or you have questions about the install of the software Do Not Hesitate to call SSE at (312)243-6515. We will be glad to walk you through it on the phone.

1. Retrieve software from DAT to Mac (Preferably to your Tech Mac Computer) using Retrospect. Refer to the **Retrospect Section** of your Tech Manual.

2. On your Mac Tech Computer be sure that the PC Exchange Control Panel is in use.

A. There should be a Control Panel folder located in the Mac Tech Computer System Folder. Make sure that the PC Exchange control panel is in the control panel folder upon startup of the Mac Tech Computer.

3. Copy the TEL2308B.ZIP and ODIPKT.COM file to a DOS Format Floppy Disk. On the PC Tech Computer create a directory named NCSA and copy the files from the Floppy Disk to that Directory.

1. Insert Dos Disk into the Mac Floppy Drive.
2. Move the TEL2308B.ZIP, ODIPKT.COM files to the Floppy Disk Icon.
3. Using the Special Menu, EJECT the disk.
4. Insert disk in Floppy Drive of the Tech PC Computer.
5. From the dos prompt create NCSA directory
Command: MD C:\NCSA
6. Copy the files from the Floppy Disk to the New directory.
Command: COPY A:*.* C:\NCSA

4. On Your Mac Tech Computer set up the MACTCP Control Panel.

- A. Select Ethernet.
- B. Select More.
- C. Set to Manual.
- D. Select OK.
- E. Set MACTCP Address for Tech Mac Computer to: ###.0.0.100
(### = Site ID, Kyoto=205, San Diego=206)
- F. Restart the Tech Mac Computer.

5. On the Mac Tech Computer Startup the NCSA Telnet Application

- A. Under EDIT select preferences, Set to FTP Server.
- B. Server Mode should be set to ON, No Password Needed.
- C. The Box for USE MACBINARY II should be Marked.
- D. Select OK

6. On the Mac make sure the software that is to be transferred to the PC (zip files) is in the root directory or disk drive folder and not on the Desktop. If the files to be transferred are on the desktop just drop them into the Hard drive folder.

7. On the PC Tech Computer.

A. Go to the NCSA Directory.
Command: `CD C:\NCSA`

B. Unpack the NCSA software.
Command: `PKUNZIP TEL2308B.ZIP`

C. Type `EDIT CONFIG.TEL`

D. Change the Following Line
`myip=#####`
to
`myip=###.0.0.101`
(### = Site ID)

E. Save the File (**ALT-F** then **S** or Select **Save**)

F. Exit the program (**ALT-F** then **X** or Select **EXit**).

8. At the Prompt (`C:\NCSA>`) Type `ODIPKT` and hit ENTER

9. At the Prompt (`C:\NCSA>`) Type `FTP ###.0.0.100` and hit ENTER
(### = Site ID)

10. At the Prompt (Username:) Hit Enter or Return

11. At the Prompt (`FTP>`) Type `BINARY` and hit ENTER

12. At the Prompt (`FTP>`) Type `HASH` and hit ENTER

13. At the Prompt (`FTP>`) Type `LS` and hit ENTER
This should list all available files under the disk drive of the Tech Mac Computer. You should be able to see the zip files that were restored from the DAT.

14. At the Prompt (`FTP>`) Type `GET RP7_26.ZIP` and hit ENTER
The program should begin transferring the zip file from your Mac to your PC Tech Computer.

A. At the Prompt (`FTP>`) Type `GET BT7_26.ZIP` and hit ENTER
B. At the Prompt (`FTP>`) Type `GET SCRIPT726.ZIP` and hit ENTER
C. You may now Quit out of FTP.
At the Prompt (`FTP>`) Type `QUIT` and hit ENTER

15. You should place the `RP7_26.ZIP`, `BT7_26.ZIP`, and `SCRIPT726.ZIP` file in the `C:\SYSTEM4\ARCHIVE` directory.
Command: `COPY C:\NCSA\RP7_26.ZIP C:\SYSTEM4\ARCHIVE\RP7_26.ZIP`
Command: `COPY C:\NCSA\BT7_26.ZIP C:\SYSTEM4\ARCHIVE\BT7_26.ZIP`
Command: `COPY C:\NCSA\SCRIPT726.ZIP C:\SYSTEM4\ARCHIVE\SCRIPT726.ZIP`

16. Do the standard procedure for updating the software to the cockpits.
Follow the **Software Install Procedure**

-Michel S. Lowrance
Firestorm
Site Service Engineering

Software Install Precedure, Release 7_26, July 31, 1996

SOFTWARE INSTALL PROCEDURE

If there are any problems during or you have questions about the install of the software Do Not Hesitate to call SSE at (312)243-6515. We will be glad to walk you through it on the phone.

You will be requested on a determined date to be sure that the Tech PC is loaded up on the Network and that the Pipeline 50 be hooked up and available.

- A. Reboot the PC Tech Computer.
- B. When it asks if you wish to load the network software select Yes.
If it does not ask but goes straight to a C: prompt type in the following:
Command: STARTNET
This will load up the network software.
- C. Be sure the Pipeline 50 is hooked up the Ethernet Hub or Lan Switcher via a Ethernet Cable.
- D. When both the **PWR** and **WAN** lights are solid green (Not blinking) on the Pipeline 50 itself then it is setup and ready for use.

NOTE: If you do not have a Pipeline 50 then a DAT will be sent to you. You will have to follow the **FTP Procedure** that will be provided to get you to the beginning point of this procedure.

First we will need to rename your current software so that If the New Software is corrupted you will be able to recover and continue with no interruptions.

1. After the Software has been downloaded by the VGL LABS through the Pipeline 50 you will find the following files in the system4\archive directory of your Tech PC:

BT.ZIP
BT7_26.ZIP
RP.ZIP
RP7_26.ZIP
SCRIPT.ZIP
SCRIPT726.ZIP

- A. Rename the following files as described below:

Command: CD C:\SYSTEM4\ARCHIVE
Command: REN RP.ZIP RP6_3.ZIP
Command: REN BT.ZIP BT6_3.ZIP
Command: REN SCRIPT.ZIP SCRIPT63.ZIP

- B. You will now have to rename the New files so that they can be used for install. This will make REL6_3 your "Current" install files. Command:

CD C:\SYSTEM4\ARCHIVE
Command: REN RP7_26.ZIP RP.ZIP
Command: REN BT7_26.ZIP BT.ZIP

In order to reload REL3_7 it would be nessary to change the file names back so that REL3_7 is again your "Current release"

2. You need clear the current VGL_LABS Directory of the script files so that the new script files can be installed. However we need to make sure that the files are not Totally Deleted so that you can switch back to REL6_3 if there is a problem. Do the following:

```
Command: CD C:\
Command: MD SCRIPT63
Command: XCOPY C:\VGL_LABS\*. * C:\SCRIPT63 /S
Command: CD C:\VGL_LABS
Command: DEL *.* (WARNING - be sure you are in the VGL_Labs directory
when you enter this command)
```

This is nessary if you have the original script in your C:\SYSTEM4\ARCHIVE not only for backup put to also clean out the directory for new files.

3. Copy the SCRIPT726.ZIP file to the VGL_LABS directory.
Command: COPY C:\SYSTEM4\ARCHIVE\SCRIPT726.ZIP C:\VGL_LABS\SCRIPT726.ZIP

4. Go to the VGL_LABS directory and unzip the script file.
Command: CD C:\VGL_LABS
Command: PKUNZIP SCRIPT726.ZIP
If it asks if you wish to overwrite select Y for Yes or A for All.

5. Format eight 3.5" Disks with system files using a Novel DOS Machine.
Command: FORMAT A: /S

6. Label the Disks as follows:

- Pod Install Rel 7_26
- Review Install Rel 7_26
- Load BT Pod Rel 7_26
- Load RP Pod Rel 7_26
- Load BT Review Rel 7_26
- Load RP Review Rel 7_26
- Load BT Camera Rel 7_26
- Load RP Camera Rel 7_26

7. Run MAKEDISK.BAT from the VGL_LABS directory.
Command: CD C:\VGL_LABS
Command: MAKEDISK.BAT

- It will ask you to insert a system formatted disk.
Insert the "Pod Install Rel7_26" disk then Hit **C** to Continue.
- It will give you one choice of Releases to load. Select **1** for REL7_26.
- It will give you eight choices..
Hit **1** for Pod Install.
- Remove the Disk when it comes back to the menu screen.
- Insert the "Review Install Rel7_26" Disk
- Select **2** for Review Install.
- Remove the Disk when it comes back to the menu screen.

- H. Insert the "Load BT Pod Rel7_26" Disk
- I. Select **3** for Load BT.
- J. Remove the Disk when it comes back to the menu screen.
- K. Insert the "Load RP Pod Rel7_26" Disk
- L. Select **4** for Load RP.
- M. Remove the Disk when it comes back to the menu screen.
- N. Insert the "Load BT Review Rel7_26" Disk
- O. Select **5** for Load BT Review.
- P. Remove the Disk when it comes back to the menu screen.
- Q. Insert the "Load RP Review Rel7_26" Disk
- R. Select **6** for Load RP Review.
- S. Remove the Disk when it comes back to the menu screen.
- T. Insert the "Load BT Camera Rel7_26" Disk
- U. Select **7** for Load BT Camera.
- V. Remove the Disk when it comes back to the menu screen.
- W. Insert the "Load RP Camera Rel7_26" Disk
- X. Select **8** for Load RP Camera.
- Y. Remove the Disk when it comes back to the menu screen.
- Z. Select **X** for Exit.

8. You can now update the pods and mission review using the Pod Install Disk or Review Install disk in the following manner:

- A. Be sure you have the Tech Pc loaded up on the network.
Refer to the first section of this Procedure.
- B. Go to the first pod in the set.
Insert the "Pod Install Rel 7_26" Disk into the A: Drive and Reboot the PC.
- C. When back at the DOS Prompt (C:\) remove the disk and reboot the PC again.
The PC should reboot and start downloading both the RP.ZIP and BT.ZIP files from the Tech PC.

- D. Continue this process with all the pods.
- E. Use the "Review Install Rel7_26" Disk for the Mission Reviews.

This will complete the software load of the PC's.

- 9. The following disks will be used to select which software will be running on each set:
 - Load BT Rel 7_26
 - Load RP Rel 7_26
 - Load BT Review Rel 7_26
 - Load RP Review Rel 7_26
 - Load BT Camera Rel 7_26
 - Load RP Camera Rel 7_26

Use the appropriate disk in order to load the correct software.

For example in order to get your set to run BT do the Following:

Place the "Load BT Pod Rel7_26" in the disk drive of the cockpit pc.

Reboot.

When back at prompt remove disk and reboot again.

Go to the next Pod and do the same till all pods of the set are reloaded.

Same for the mission review just using the "Load BT Review Rel 7_26"

Disk instead.

In order to switch to RP you will follow the same steps above but using the appropriate RP disks instead.

- 10. Copy the New Console Folder to each of the Sets Consoles.
Edit the CONSOLE.INI file in the Console Folder to match the Cockpit Addresses.

CONSOLE.INI Modification

Included with this release is a file labeled 'Stationery-Console.ini'. This file is the template which all the CONSOLE.INI's are based on. To modify the file to be used for your side the following procedure is done:

- 1. Make a two copies of the Stationery-Console.ini file. You will be using a copy to make sure you have a clean copy in case you make a mistake. Rename the Copies as Follows:

Review-Console.ini

Camera-Console.ini

- 2. Identify the nose art on the cockpits of the side being upgraded. Delete the lines on the Network Endpoint List which are not your cockpits. Note that there are separate Network Endpoints for mission review and camera ships. When modifying the Review-Console.ini file use the Mission Review Network Endpoints. When modifying the Camera-Console.ini file use the Camera ship Network Endpoints.

- 3. Beneath the Network Endpoint list are the Network Endpoint paragraphs. Delete the Network Endpoint paragraphs of the cockpits which you do not have on the side. Make sure that the entire paragraph is deleted. A complete paragraph is shown on the next page:

[NetworkEndpoint::Cockpit::Age of Discovery]

classID=Ptcp

hostType=0

state=0

resourceID=130

resourceIndex=6

pictID=300

addressIP=xxx.x.x.xxx

addressUse=0

openTimeout=32767

listenTimeout=0

delay=1

throughput=1

reliability=1

precedence=0

fragment=0

timeToLive=60

security=0

queryTimeout=600

loadQueryInterval=1

inProgressQueryInterval=10

defaultPort=1501

localhostPort=1501

openInterval=10

4. In the remaining Network Endpoint paragraphs, insert the correct IP number of the cockpit for your site in the AddressIP line.

5. Several fonts were packed with this software release. Place a copy of all those fonts in the fonts folder of system folder on all your operator's consoles.

6. In order to use the Console you will need to rename the Console.ini file that you will be using.

A. If you are running a set with Mission Reviews you will need to rename the Review-Console.ini file to CONSOLE.INI.

B. If you are running a set with Camera ships you will need to rename the Camera-Console.ini file to CONSOLE.INI

*****WARNING*****

If you decide to switch from Mission Review to Camera ship or Vice Versa remember to rename the Console.ini file back to what it was before renaming the new CONSOLE.INI

example:

Switched Set from Mission Review to Camera ships.

A. Rename CONSOLE.INI to Review-Console.ini

B. Rename Camera-Console.ini to CONSOLE.INI

*****WARNING*****

The software installation is now complete.

Enjoy Red Planet and BattleTech.

VWE System Comparison

Generation	2.5/3.0	4.0
Graphics		
Rendering	Flat-shaded	Texture mapped
Polygon		
Polygon Rate	3,000 per second est.	300,000 per second
Frame Rate	11 hz	18 hz
Resolution	480 x 360	800 x 600
Depth Complexity	2.5	10
Color Depth	16 bit	24 bit
3D Technique	Priority Sort	Z-Buffer
Transparency	no	yes
Processors	two TI 32-bit processors	8,192 single-bit processors+ 1 Intel i860 processor
Displays		
Main Window	25" Direct view monitor	40° wide x 30° tall infinity optic window
Radar Screen	14" monitor, 640 x 480, 16 color	14" monitor 640 x 480, 256 color
Engineering	sixteen 8-character message displays	five 5" monitors, 640 x 480 resolution & graphic plasma display
Sound		
Mode	panned stereo	3D localized quadraphonic
Speakers	8	12
Processors	2 digital signal processors	
Network		
Type	Arcnet	Ethernet
Bandwidth	2.5 Mb/sec	10Mb/sec
Game Computer		
Speed	16 Mhz	90 Mhz
Width	16 bits	32 bits
Memory	8 Mb DRAM	8 Mb DRAM